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THE BENTON HARBOR MICHIGAN FRUIT MARKET

PRESENT AND PROPOSED FACILITIES

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Transportation and Facilities Research Division
Agricultural Marketing Service
U. S. Department of Agriculture

PREFACE

This study was undertaken at the request of the city of Benton Harbor, Mich., and its Market Board. The primary objective was to determine whether the Benton Harbor Fruit Market should be remodeled on its present site or be relocated within or outside of the city. Secondary purposes were to ascertain the type and extent of facilities that should be planned for any new market, the estimated cost, operating expense, and revenue requirements of such a project, the means and method of financing it, and the savings and other benefits reasonably to be expected from realization of the proposal.

Data used as the basis for necessary fact findings and conclusions were assembled by personal observation of the existing market and its operations, examination of market records and accounts, and discussion, interview, and correspondence with city and market officials, contractors, construction engineers, growers, buyers, and others in the area. Certain determinations of the study were made from information obtained in a grower survey, the content and coverage of which are described in appendix A.

This study is part of a broad program of continuing research designed to reduce the cost of marketing farm products.

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Members of the staff of this Division also assisted, particularly Harry G. Clowes, who conducted the initial discussions with Benton Harbor officials and was consulted on several phases of the study; A. B. Lowstuter, who made the cost estimates and advised on the layout and platform design; and Catharine A. Perry, who did the drawings.

This study was conducted and the report was prepared under the general guidance and direction of W. C. Crow, Director, Transportation and Facilities Research Division, Agricultural Marketing Service, U. S. Department of Agriculture.

Summary	5
1. Importance of the market.	7
(a) History	7
(b) Area and number of growers served	7
(c) Volume of business.	9
(d) Distribution area	9
(e) Prospective needs	12
2. Description of the present market	13
(a) Ownership and organization.	13
(b) Location and size	13
(c) Selling and loading facilities.	17
(d) Administration, service, and supporting facilities.	19
(e) Other facilities.	21
(f) Nearby businesses and area wholesale trade.	22
3. Operation of the market	23
(a) The selling season.	23
(b) Method of sale.	23
(c) Waiting lines and selling time.	26
(d) Loading operations.	27
(e) Mixed-load shipping	28
(f) Season-buyer operations	28
(g) Day-buyer activity.	29
(h) Finances.	30
4. Shortcomings of the present market.	33
(a) Traffic problems and hazards.	33
(b) Space limitations	33
(c) Platform inadequacies	35
(d) Other deficiencies.	37
5. Facilities needed at a new market	37
(a) Possible sites.	37
(b) Selling lanes	39
(c) Buyer platforms	39
(d) Service and supporting facilities	40
(e) The layout.	41
6. Estimated costs and annual revenue requirements	45
(a) Cost of a new market.	46
(b) Revenue requirements.	46
(c) Sources of income	50
(d) Financing the debt.	53
7. Savings and other benefits realizable from a new market	54
(a) Savings to growers.	54
(b) Benefits to buyers.	55
(c) Benefits to Benton Harbor	56
Appendix A. Synopsis of the 1958 grower survey	58
(a) Acreage, number of growers, and products per grower	58
(b) Truck census.	62
(c) Growers' comments on present market	63

	<u>Page</u>
Appendix B. Considerations for an appropriate scale of growers' fees. .	66
Appendix C. Data and suggestions regarding day buyers	67
(a) Analysis of activities	67
(b) Suggestions for encouraging day-buyer attendance	70
Appendix D. Recommendation of area planning consultants	70

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SUMMARY

(Paragraph numbers keyed to report sections)

1. The Benton Harbor Fruit Market has been an important outlet for fresh produce in southwestern Michigan for over 90 years. In recent years, total sales have exceeded \$9 million annually. The market regularly serves more than 2,000 producers. About 65 buyers rent stalls for the season and an average of 40 additional buyers rent stalls by the day. Combined sales of strawberries, peaches, and tomatoes, the three principal products sold at the market, represent roughly half of total fresh marketings of these items in the entire State. Produce bought on the market is distributed overnight within a consuming area of 50 million population. Present trends indicate a continuing need for the market, probably on an expanding scale.

2. The market is owned and operated by the city of Benton Harbor. It occupies 700,000 square feet in the northwest section of the city near the business district. Principal facilities consist of a 130' x 900' paved sales area, over 3,000 linear feet of loading platforms containing 293 buyer stalls, automatic scales, hydrocooling equipment, administration building, traffic control and communications tower, restaurant, retail market, and migrant labor camp. No nearby business is functionally related to the market. Six food wholesalers, handling an estimated 800 carlots annually, are located in the Benton Harbor-St. Joseph metropolitan area (1950 population: 115,702). Two are fruit and vegetable dealers; they obtain about 30 carlots, or 6 percent of their annual volume, from the market. Economic need for consolidating any of these wholesale food operations with the fruit market appears lacking.

3. The selling season covers the 5 months from about June 1 to around November 1. From 40 to 50 different products are available, some from other producing areas. Growers pay 25 cents to \$1 in entry fees and handle their own sales. Deliveries are made to buyer stalls and the growers are paid immediately after unloading onto the platform. Buyers load out across the platform into semitrailers or large vans. Many mixed loads are assembled and shipped from the market. Season buyers rent 215 of the platform stalls, paying \$125 for most units and \$175 for some larger stalls; day buyers pay a net fee of \$2.50 per day. Annual gross revenues averaged somewhat more than \$90,000 in 1957 and 1958; direct operating expenses were about \$50,000. The balance was expended for advertising and promotion, disbursed as capital investment, placed in depreciation reserves, or credited to market account in the city general fund.

4. As now situated, the market has certain shortcomings: (1) Its location causes burdensome traffic congestion, interference with other business operations, and increased accident hazards, besides blocking the economic development of this part of the city. (2) Space limitations delay producers in delivering their loads. (3) Inadequate platform facilities handicap loading-out operations on the bulk of the volume.

(4) Lack of sufficient supporting facilities impairs the efficiency and convenience of the overall operations.

5. Basic disadvantages of the market cannot be overcome in its present location. A new market should be built on a tract of at least 55 acres within 2 or 3 miles of the new interstate highway east or southeast of the city. Suggested facilities include a 156' x 750' sales area; seven 20' x 400' buyer platforms; a combination control tower; communications center, and administration building; a restaurant, motel, office building, bank, fencing, floodlights, and other items. The migrant labor camp should adjoin the market. Platforms should be built at right angles to the sales lanes, with provision for peripheral traffic flow to expedite delivery and unloading. Space should be reserved for occupancy by wholesale, processed food, or related businesses as well as for expansion of the market proper.

6. Estimated total cost of such a market would be slightly over \$1 million. Paving would cost over one-third of the total; platforms roughly one-third; other buildings, one-fifth. Cost of land in condition to build is included at \$1,200 per acre. After crediting the project with the book value of present market land and the administration building, net indebtedness to be amortized would approximate \$758,000. The investment of \$66,000 in nondepreciable land would require only interest payments at the outset, leaving the principal for later liquidation. Annual revenue required would be about \$151,000 of which \$82,500 would be needed for operating expenses and contingencies and \$68,500 for debt service and reserves, based upon 5 percent interest and 25-year amortization. It would be necessary to establish substantially higher entry fees for growers and to raise buyers' rentals moderately above present schedules to provide the required revenue. Most feasible method of financing the project would be general obligation bonds issued by the city, to be serviced and retired exclusively from market revenues.

7. The building of a suitably located new market should benefit growers, buyers, and the city of Benton Harbor itself. Calculated savings to growers in time and transportation costs are estimated at approximately \$86,000 each season. Buyers also should save about \$33,000 a year on transportation expense and should effect additional economies in handling costs. The city should benefit from increased tax revenues of \$50,000 to \$100,000 annually following the economic development of the present market site and surrounding area. It should likewise benefit from the reduction of traffic congestion and accident hazards and, at least, the partial elimination of police and welfare problems in the revitalized region.

THE BENTON HARBOR, MICHIGAN, FRUIT MARKET

Present and Proposed Facilities

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1. IMPORTANCE OF THE MARKET

The southwest section of Michigan is especially well-suited for production of fruit and vegetables. The proximity of the lake tempers the climate, retarding fruit bloom and thus reducing the danger of frost damage. The mean annual precipitation of 33 inches provides adequate moisture for the proper development of both fruit and vegetable crops. The soil is predominantly sandy loam that is well adapted to cultivation of orchard, berry, and truck crops.

(a) History

A market at Benton Harbor was the logical development from the natural advantages of the area and the eventual need for a sales outlet for its produce. Historically, the market had its beginnings on the city wharves before 1870. Early growers brought their produce there for shipment across the lake to commission merchants in Chicago, or for outright sale to shipmasters and other buyers. When rail shipments became dominant about 1900, the bulk of sales activity shifted to team tracks and loading platforms just west of the present C. & O. station. By 1925, the advent of truck transportation had moved the market place into the streets just north of the present site. Sales were made there and growers transferred their produce directly to buyers' vehicles. As volume rapidly increased, congestion and interference with traffic induced the city to provide the nucleus of present market facilities in 1930. While some platforms have been added, the main market area remains essentially unchanged and still has its original buyer buildings. The market continued to grow and, by the early 1940's attained its present prominence as "the largest cash-to-growers outlet in the world."

(b) Area and Number of Growers Served

The producing sections served by the Benton Harbor market are those within a 50-mile radius of the city. However, most farms utilizing its facilities are less than half of that distance from the market. Among growers responding to this inquiry in a 1958 survey, the average distance

was found to be 14.2 miles. 1/ The whole of Berrien, Van Buren, and Cass Counties is within the Benton Harbor supply area. The southwest quarter of Allegan County to the north and the northern edges of two Indiana counties on the south are likewise served by the market.

The four named Michigan counties constitute the principal production area of the seven-county southwest crop reporting district. More than 80 percent of fruit acreage and three-fourths of the vegetable acreage reported in the 1954 census for this district were in these counties. In relation to State totals, the proportions were 41 percent of fruit acreage and 21 percent of vegetable acreage. Data for the individual counties are shown in table 1.

Table 1.--Farms reporting fruit and vegetable acreage in the Southwest Michigan Crop Reporting District by counties, 1954 census

County	Tree fruits, grapes, and berries				Vegetables (except potatoes)			
	Farms	Acres	Share of -		Farms	Acres	Share of -	
	report-	reported:	District:	State	report-	reported:	District:	State
	ing	:	:	:	ing	:	:	:
	Farms	Acres	Percent	Percent	Farms	Acres	Percent	Percent
Berrien....	5,622	49,026	46	23	2,031	10,778	36	10
Van Buren..	1,804	24,590	23	12	1,289	6,208	21	6
Allegan....	878	11,331	11	5	582	4,439	15	4
Kent.....	788	11,523	11	5	364	3,115	10	3
Ottawa.....	578	4,810	4	2	462	3,450	12	3
Kalamazoo..	462	3,661	3	2	194	699	2	1/
Cass.....	273	2,232	2	1	206	1,098	4	1
Total...	10,405	107,173	100	50	5,128	29,787	100	27

1/ Less than 0.5 percent.

1/ All references to the "survey" mean the study of growers' use of the market facilities conducted during late 1958 for this report in the four principal counties supplying the market. It was conducted by questionnaire sent out by the county agents, under the sponsorship of Michigan State University, and coordinated by the District Extension Agent in Marketing. Findings and summary conclusions of the study appear throughout the text and in appendix A.

Growers using the facilities of the Benton Harbor Market each season are estimated to number between 2,000 and 2,500. More exact determination is not possible since registration is not required. Some 400 growers who supplied such information in the survey made from 1 to 630 trips to the market during the June-to-November season. Average number of trips for these respondents was 68 per season.

(c) Volume of Business

Various measures of the volume of business transacted at the Benton Harbor Fruit Market are shown in table 2 for a series of years and for the averages of 5-year preceding periods from the inception of records. In 1957 and 1958, growers' total receipts exceeded \$9.5 million. Physical volume averaged about 6,425 carlot equivalents in these 2 years. Average value per car was therefore \$1,500.

During 1951-55, after a severe freeze that damaged peaches, volume averaged only 5,360 carlot equivalents. The approximate 18 percent increase from 1955 to 1958 represents a substantial step toward recovery of the high volumes of the 1930's and the early postwar period. Growers' loads handled over the market in 1958 numbered 89,000 and contained 4,820,000 packages of various sizes, or an average of 54 packages each. Loads averaged \$107 in value.

Table 3 shows that growers' receipts on the market in 1958 represented, for the first time since 1940, slightly more than 10 percent of the total value of Michigan fruits and vegetables. This total includes potatoes (as well as vegetables for processing), which are not sold in any significant volume on the market. Principal products offered at Benton Harbor are apples, peaches, strawberries, and tomatoes. Collectively, the four constitute nearly 80 percent of total dollar volume. Table 4 shows that three of them likewise represent substantial proportions of total Michigan sales, ranging from 37 to 57 percent. Nationally, Michigan ranks second in value of strawberries, third in apples, and fifth or sixth in peaches; seasonally, it stands first in value of tomatoes among the States producing late crops.

(d) Distribution Area

The primary distribution area for produce purchased at the Benton Harbor Fruit Market is the 5-State region of Michigan, Ohio, Indiana, Illinois, and Wisconsin. Apparently, more than three-fourths of total sales are made for shipment into these States. Most of the remainder moves into eight more States and one Canadian province which are contiguous to this north-central region. As seen in figure 1, this secondary territory lies generally within 400 miles of the market, which can be reached by overnight haul. It is estimated that approximately 50 million consumers live in the distribution area thus defined. Some small percentage of market sales goes into more distant territory, reaching a total of 25 States.

Table 2.--Volume of business on the Benton Harbor Fruit Market, 1931-58

Year	Number of packages <u>1/</u>	Growers' loads	Average : number of : packages : per load :	Carlot equivalents <u>2/</u>	Growers' receipts Total : Per load
Averages:	<u>1,000</u> <u>packages</u>				<u>1,000</u> <u>dollars</u> : <u>Dollars</u>
1931-35	6,289	118,485	53	7,921	3,064 : 26
1936-40	6,000	122,009	49	7,919	3,981 : 32
1941-45	4,258	90,527	53	6,101	6,194 : 71
1946-50	4,392	96,665	45	6,905	8,249 : 85
1951-55	4,166	85,349	49	5,360	8,071 : 94
1956-58	4,870	85,593	57	6,239	9,293 : 109
1946.....	4,602	92,627	49	7,493	9,362 : 101
1947.....	4,296	95,205	45	6,738	8,387 : 88
1948.....	3,566	88,008	40	5,689	6,985 : 79
1949.....	4,293	97,410	44	6,831	6,745 : 70
1950.....	5,204	110,073	47	7,777	9,768 : 89
1951.....	3,552	78,246	46	4,050	6,188 : 79
1952.....	4,673	95,749	49	6,077	8,389 : 87
1953.....	4,331	89,861	48	5,723	9,116 : 101
1954.....	4,199	77,900	54	4,917	7,572 : 97
1955.....	4,076	84,989	48	6,031	9,089 : 107
1956.....	4,861	80,170	61	5,855	8,635 : 108
1957.....	4,928	87,549	56	6,489	9,698 : 111
1958.....	4,820	89,061	54	6,373	9,545 : 107

1/ The size of packages varies with the wide assortment of containers used for the commodities sold. It includes small cartons, several different crates, baskets, and sacks.

2/ The data for the 1930's are subject to an approximate 10 percent downward adjustment to be comparable to the figures for the 1950's by reason of heavier average loadings in the latter years.

Table 3.--Growers' receipts at Benton Harbor Fruit Market as percentage of total farm value of Michigan fruits and vegetables, 1931-58

Year	: Growers' receipts : at Benton Harbor : market	: Total farm value : of Michigan fruits : and vegetables <u>1/</u>	: Growers' receipts : as percentage of : total farm value
Averages:	: <u>1,000 dollars</u>	: <u>1,000 dollars</u>	: <u>Percent</u>
1931-35.....	: 3,064	: 28,227	: 11.3
1936-40.....	: 3,981	: 39,013	: 10.2
1941-45.....	: 6,194	: 79,221	: 8.0
1946-50.....	: 8,249	: 124,340	: 6.9
1951-55.....	: 8,071	: 95,599	: 8.5
1956-58.....	: 9,293	: 98,803	: 9.4
1946.....	: 9,362	: 129,102	: 7.2
1947.....	: 8,387	: 158,940	: 5.3
1948.....	: 6,985	: 142,674	: 4.9
1949.....	: 6,745	: 90,879	: 7.2
1950.....	: 9,768	: 100,104	: 9.8
1951.....	: 6,188	: 99,964	: 6.2
1952.....	: 8,389	: 109,195	: 7.7
1953.....	: 9,116	: 93,838	: 9.7
1954.....	: 7,572	: 82,000	: 9.2
1955.....	: 9,089	: 92,996	: 9.8
1956.....	: 8,635	: 97,642	: 8.8
1957.....	: 9,698	: 103,849	: 9.3
1958.....	: 9,545	: 94,917	: 10.1

1/ Includes potatoes and vegetables for processing.

Table 4.--Sales of four principal products at Benton Harbor Fruit Market as percentage of total Michigan sales in 1958

Commodity	: Total value : of Michigan fresh : market sales	: Value of sales : at Benton Harbor : market	: Market sales as : percentage of total : State sales
	: <u>1,000 dollars</u>	: <u>1,000 dollars</u>	: <u>Percent</u>
Apples.....	: <u>1/</u> 15,000	: 1,182	: 7.9
Peaches.....	: <u>1/</u> 4,300	: 1,598	: 37.2
Strawberries.....	: 5,590	: 3,183	: 56.9
Tomatoes.....	: 3,827	: 1,584	: 41.4
Total.....	: 28,717	: 7,547	: 26.3

1/ Estimated on basis of relationships in previous years.

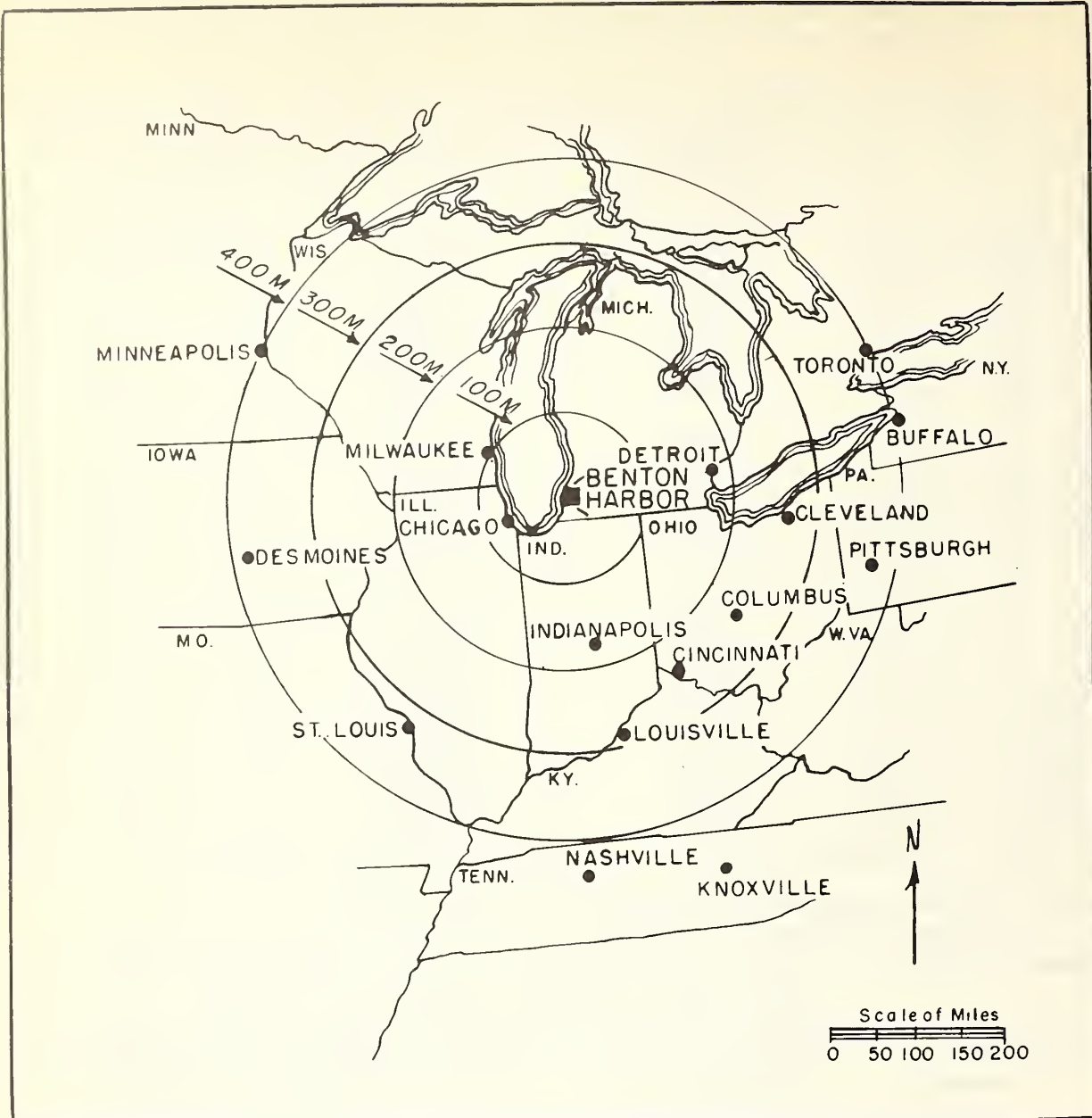


Figure 1.--Principal area of distribution for produce bought at the Benton Harbor Fruit Market.

(e) Prospective Needs

Recent trends, as well as growers' present plans, suggest that the need for market facilities for fresh fruits and vegetables in the Benton Harbor area may increase in foreseeable future seasons. Volume has been expanding in recent years, and it may expand more rapidly as substantial acreages of nonbearing fruits come into production. Moreover, growers in the Benton Harbor supply area now plan to enlarge their fruit and vegetable acreage,

judging by answers to this question in the survey. Out of nearly 300 growers giving information on this point, 193 planned to increase acreage of one or more products during the next 5 years; only 104 planned decreases. By product classifications, the ratio of planned increases to decreases in fruits and berries was better than 3 to 1; in vegetables and melons it was 6 to 5. (These ratios represent growers' intentions; not necessarily the relation between actual acreages.) Table 5 summarizes the results of this part of the survey for each of the 12 products or product-groups covered by the respective counties. Tomatoes were the only commodity on which more growers planned to decrease than to increase their future plantings.

The prospective long-term expansion of mixed-load assembly in producing areas for direct shipment to retail outlets or other accounts also points to a possibly enhanced demand for the services of the Benton Harbor market. It is peculiarly well-suited for such operations by reason of three factors: (1) The wide variety of produce available; (2) the methods of sale, platform assembly, and loading-out which prevail; and (3) the ideal location of the market in relation to many major consuming centers. These points are elaborated in section 3 (e).

2. DESCRIPTION OF THE PRESENT MARKET

(a) Ownership and Organization

The Benton Harbor Fruit Market is municipally owned and managed. The governing body is the Market Board of seven members, two of whom must be growers. Board members are appointed by the mayor with the approval of the city commission. In administering the affairs of the market, the Market Board acts as an independent agency, responsible directly to the commission. Executive authority on the market is vested in the manager, called the "market master" in the creating ordinance. The sale of produce on public property is confined to the market area defined in the city code. 2/

(b) Location and Size

The market is in the northwest corner of the city, at the western edge of the business district (fig. 2). Figure 3 is a panoramic view of the market looking southwest. Boundary streets are Ninth on the east (crossing the lower left corner), Market on the north (the right side), Eleventh and Twelfth on the west (this side of the park and at upper right), and Britain Avenue on the south (upper left). Bond Street bisects the market from the lower left to the upper right; Eleventh Street continues through the main market area where the break appears.

The picture shows that the market forms a rough "T". The main area (north of Bond) forms the cross-bar, and is approximately 285' x 1,200'

2/ General Code of the City of Benton Harbor, Mich. Public Market, Art. 12, Sec. 1201 and 1202.

in size; the adjoining area (south of Bond) forms a 600' stem which is 500' wide along Bond, but is cut back to a 300' width in the far half which extends to Britain Avenue. Two smaller parcels complete the market property: One is east of Ninth and holds the administration building in addition to the small parking lot; the other is across Britain Avenue and contains the migrant labor camp. In all, the market covers about 700,000 square feet, or approximately 16 acres.

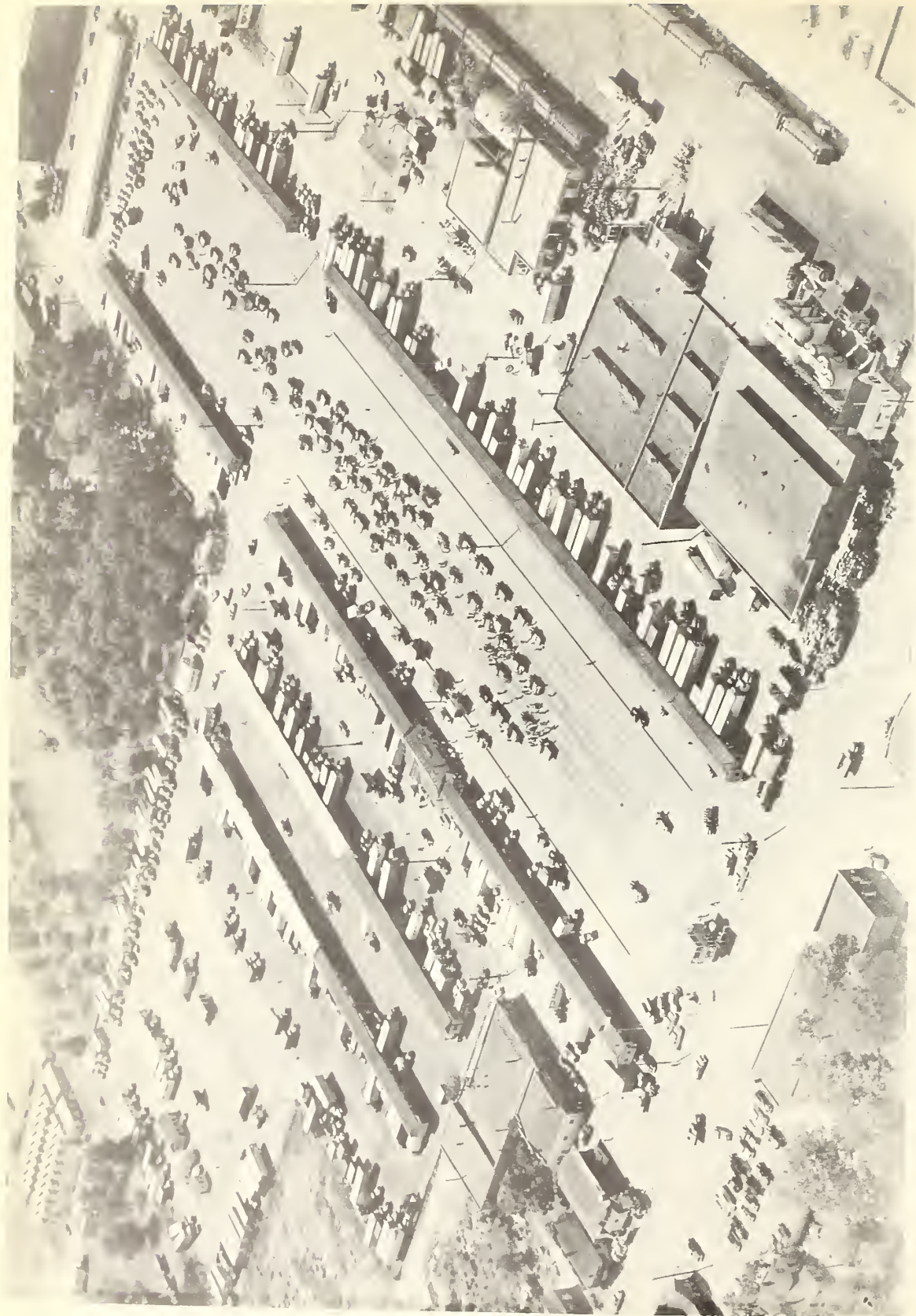
Table 5.--Replies of growers who use Benton Harbor Fruit Market to questionnaire regarding plans to increase or decrease acreages of selected products over the next 5 years, 1958

Product	Counties										Total
	Allegan		Berrien		Cass		Van Buren				
	Increase:	Decrease:	Increase:	Decrease:	Increase:	Decrease:	Increase:	Decrease:	Increase:	Decrease:	
	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:	Replies:
Apples.....	1	-	47	8	2	-	13	4	63	12	
Peaches.....	1	-	64	12	1	-	18	3	84	15	
Pears.....	-	-	31	2	-	-	4	1	35	3	
Plums.....	-	-	15	6	-	-	1	1	16	7	
Raspberries.	-	-	31	28	3	-	7	4	41	32	
Strawberries	1	1	17	13	1	-	11	5	30	19	
Grapes.....	-	-	10	1	-	-	3	-	13	1	
Other fruits and berries	1	-	21	10	1	-	10	1	33	11	
Total fruit and: berries.	4	1	236	80	8	-	67	19	315	100	
Tomatoes....	-	-	19	20	-	3	3	5	22	28	
Cucumbers...	-	-	4	1	2	-	4	7	10	8	
Cantaloups..	-	-	10	5	1	-	2	-	13	5	
Other veg- etables and melons.....	-	-	8	6	1	-	6	4	15	10	
Total veg- etables and melons...	-	-	41	32	4	3	15	16	60	51	
Grand total	4	1	277	112	12	3	82	35	375	151	
Number of growers stat- ing acreage plans 1/...	2	1	143	82	8	3	40	18	193	104	

1/ Many growers plan to increase or to decrease acreage of two or more products; some plan to increase one or more and decrease others.



Figure 2.--Benton Harbor, Mich.



BN-9083

Figure 3.--The Benton Harbor Fruit Market.

(c) Selling and Loading Facilities

A layout of the present market is shown in figure 4. The sales area is the lined-off section of pavement 130' wide and 900' long. It begins about 100' west of 9th Street and runs to about 200' east of 12th Street. It is divided into four pairs of selling lanes alternated with five single passing lanes.

On each side of the sales area, the pavement extends about 40' to the unloading side of buyer platforms. These strips are used as streets by the growers in making delivery to buyers' stalls, and for returning unsold loads to the head of the sales lanes, as well as for docking area while actually unloading. On the other (loading) side of the platforms, along Market and Bond Streets, the docking area is unpaved and only 24' deep.

Buyers' platforms in this main part of the market are all 14' wide and of three different lengths. The longest is 630'; it runs from about 50 feet west of 9th Street all the way to 11th Street along Market on the north side. Paralleling it, over on the Bond Street side, are two platforms, each 270 feet long, separated by the restaurant. Beyond 11th Street, the platforms flanking the sales area are each 350' long. All of the 187 stalls on these platforms are 10' x 14' (fig. 5) and are rented to buyers for the season. On the other side of Bond Street (across from the restaurant), there are 28 additional stalls rented to season buyers; 17 of these platform spaces are 11 1/2' x 20'; the other 11 are 12' x 14'. In all, 215 stalls were rented to season buyers in 1959. These buyers maintained 37 offices on their platform space, which occupied the equivalent of 26 full stall units.

The remaining 78 platform stalls on the market were available in 1959 to buyers obtaining permits to purchase for the day. These stalls are south of Bond Street and of three different sizes: 19 are 10' x 14'; 37 are 12' x 14'; 22 are 12' x 20'. The last group is on the newest platform on the market, built since the photograph (fig. 3) was taken. During peach season it is taken over by hydrocooling facilities, leaving only 56 stalls for day buyers. There are some 23 curb spaces south of this newest platform which day buyers use for tailgate loading. Parking areas along 11th Street and Britain Avenue also have to be used by day buyers on peak days for loading out their purchases.

The buyer platforms south of Bond Street are relatively new. All were constructed in the past 6 years, some to replace platforms destroyed by storm. They have wooden floors, but the superstructures of three of these platforms are of steel, supporting all-metal roofs. The platforms rest on concrete piers and are generally 36 to 40 inches high. Overhangs range from 3' to 6' in width (fig. 6).



BN-9065

Figure 5.--One of the original buyer platforms along the selling area.



BN-9066

Figure 6.--One of the newer platforms south of Bond Street.

(d) Administration, Service, and Supporting Facilities

The market has three management facilities: The administration building (A in fig. 4) across 9th Street where the manager has his headquarters; the control tower (T) on 9th Street between the entrances; and the day buyers' office (DB) facing the day buyer platforms on 11th Street. The administration building is 24' x 84' and houses the inspection staff of the Bureau of Foods and Standards, Michigan Department of Agriculture, and the Farm Labor Office of the Michigan Employment Security Commission, as

well as the market manager's office. The control tower is 14' x 20' (fig. 7). Gatemmen turn in their tally books and receipts here and market traffic is directed from the second floor. The day buyers' office is a steel and corrugated metal structure 20' x 24' where these buyers register for purchasing permits and stall assignments. The Federal-State Inspection Service has a separate frame office 19' x 29' (I) in the truck parking area along Britain Avenue.



BN-9067

Figure 7.--Traffic control tower and communications center.

The restaurant is approximately 35' x 80'. It faces the south side of the sales area about 300' west of 9th Street. Automatic truck scales are at the corner of Bond and 11th Streets. Trucks go behind the day buyers' office in making separate-axle weighings. During August and early September, hydrocooling equipment for peaches is installed on, or next to, the newest day buyer platform toward the south end of the market (fig. 8).



BN-9068

Figure 8.--Hydrocooling equipment installed at newest platform.

(e) Other Facilities

Two other facilities are located on market property and administered by the Market Board although neither has an operating connection with the market itself.

A retail market structure 50' x 200' lies between the end of the selling area and the 12th Street western boundary (fig. 9). It has forty 10' x 20' stalls, separated by a 10' center aisle. Tenants of the retail section operate independently. The section performs a useful supplemental service to the market, as now located in the city, by providing a convenient facility to which consumers and other small-lot buyers can be referred when turned away from the growers' market by the wholesaling and registration requirements.



BN-9069

Figure 9.--Structure housing retail stalls on market property.

The migrant labor camp is in the southwest corner of the intersection of 11th Street and Britain Avenue (fig. 10). It occupies a 150' x 220' area and has forty 8' x 12' sleeping units plus three 20' x 24' buildings for office, cooking, and toilets. All are metal structures. The camp is intended to provide temporary quarters (up to 3 nights) for itinerant farm laborers looking for work in the southwestern Michigan area. Growers call at the Farm Labor Office in the administration building when they are ready to leave the market and are assigned the number of workers needed. These men are taken immediately to the farms where their housing becomes the responsibility of the growers.

A railroad team track is located west of 9th Street one block north of the market (lower right corner of fig. 3). It is available for shipment from (or to) the market, but its facilities have been used less and less in recent years. In 1958, not one carlot of fruits or vegetables was billed from Benton Harbor.



BN-9070

Figure 10.--Migrant labor camp administered by the Market Board. (The water tower is not on or connected with the market.)

(f) Nearby Businesses and Area Wholesale Trade

A large cannery, a frozen fruit and berry processor, a cold-storage house, two trucking terminals, and several container and package dealers, among other businesses, are in the immediate vicinity of the Benton Harbor market. None of these enterprises, however, is functionally related to the market. While many of the growers who use the market also supply produce to the processors, or store in the cold warehouse, such dealings are on different loads, intended for processing outlet or storage from the outset and packed accordingly. Only very rarely would a load, packaged for market sale, actually be delivered to one of these establishments. The trucking companies also are located here simply by happenstance; neither handles any market hauling. Four or five container dealers have establishments within two blocks of the market. This location makes them readily accessible to growers wanting to take along a supply of baskets or cartons in returning to the farm.

The metropolitan area of the "Twin Cities" of Benton Harbor and St. Joseph is the whole of Berrien County. Its population in 1950 was 115,702. Owing to its accessibility to Kalamazoo, Grand Rapids, South Bend, Michigan City, and Chicago, the area has only six wholesale food dealers. Two of these handle fruits and vegetables; together they buy the equivalent of 30 carlots a season from the market, about 6 percent of their annual volume. Three others are dry-grocery wholesalers; one is a meat dealer. Combined annual volume of these dealers is about 800 equivalent carlots, less than 15 percent of the estimated amount of food consumed in the area.

Although the facilities occupied by the wholesale trade of the area do not meet optimum criteria for most efficient handling, all except one are relatively new and involve substantial unamortized investments. Moreover, these dealers are primarily service wholesalers, delivering to retailers in a large area, for whom there would be little advantage in being located near each other or the fruit market. These facts, plus the limited season in

which the market is active, render the usual desirability of consolidating market facilities in a single location inapplicable to Benton Harbor.

3. OPERATION OF THE MARKET

The Benton Harbor Fruit Market operates every day during its season except Saturdays and days preceding holidays. This schedule reflects the function of the market as an overnight source of supply to the consuming areas which it serves. The market opens for business each day at 9:00 a.m. and active selling is usually concluded by 3:00 or 4:00 p.m. When demand is slow, or supplies unusually heavy, some selling may continue to 6:00 or 7:00 p.m., or even later. Loading out of various commodities and hydrocooling of peaches are sometimes carried on beyond the official closing time of 9:00 p.m.

(a) The Selling Season

Normally, the selling season covers the 5-month period beginning about June 1 and ending shortly after the first of November. Strawberries have the market exclusively for the first 3 to 4 weeks. Sweet cherries and gooseberries come in late June, followed by black and red raspberries, currants, dewberries, and sour cherries in early July. From the middle to the end of July, marketing commences on blueberries, snap beans, cucumbers, summer apples, tomatoes, potatoes, and peppers, usually in that order. Several of these commodities are still being sold when cantaloups, eggplant, peaches, pears, plums, lima beans, and grapes come on successively in August. Last among the principal commodities to appear are fall apples and cauliflower, around mid-September. Some 25 to 30 lesser products are interspersed throughout the season. Many of these are brought in from other growing areas.

The pattern of seasonal phasing of principal commodities sold on the market is shown in figure 11. Of these 24 products, 14 are marketed simultaneously in late August, accounting for the peak in volume which comes at the end of August or the first of September. The 14 commodities include peaches and tomatoes, the first and second most important individual products.

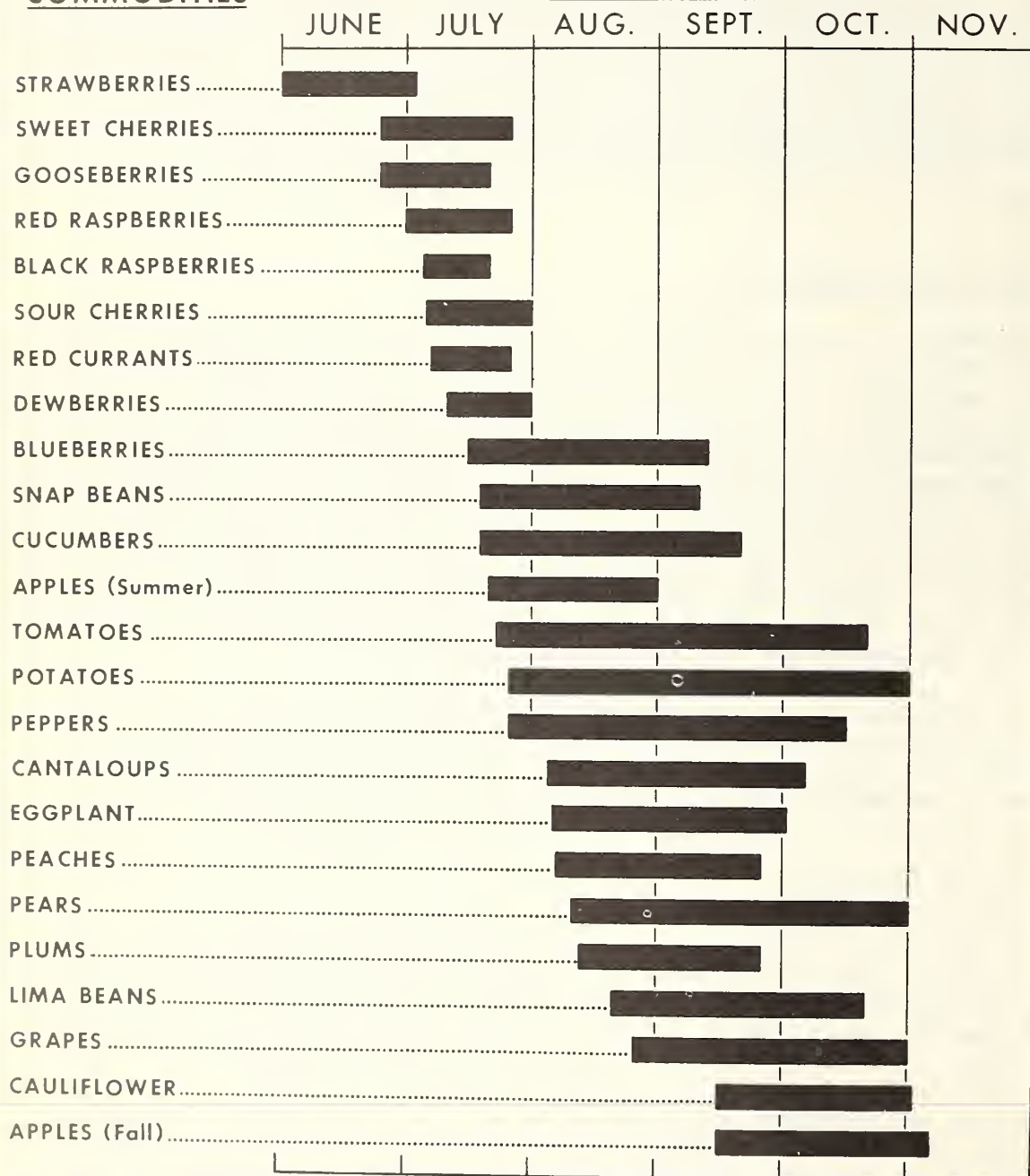
(b) Method of Sale

Growers enter the market from 9th Street on both sides of the control tower (fig. 7). To avoid cross traffic, the trucks which approach from the north are routed in on that side; those from the south use the other side. Entry fees are collected alongside the tower. These are based upon number of packages as declared by the driver of the truck. In 1959, a fee of 25 cents was paid on loads of 25 or fewer packages, a 50-cent fee on loads of 26 through 100 packages, and a fee of \$1 on all larger loads. For fee purposes, three small (one-fifth bushel) cartons, or similar units, are counted as one package. The fee collectors also tally a breakout of the load by commodity, by container size, and by variety of some commodities.

NORMAL MARKETING SEASONS FOR PRINCIPAL COMMODITIES SOLD ON BENTON HARBOR FRUIT MARKET

COMMODITIES

SEASONS



At the entrances, an occasional load, selected at random, is directed to one of two inspection spaces. Employees of the Bureau of Foods and Standards, Michigan Department of Agriculture, inspect such loads and advise growers in regard to grading and packing practices. 3/

Most loads move directly into one of the eight selling lanes. Here the buyers are usually congregated around recent arrivals. If the market has just opened, this is likely to be in the area near 11th Street or beyond (fig. 12). As the day progresses, buyers tend to work their way toward the 9th Street entrances. The backing-up of unsold loads on the market and the competitive interest of buyers in spotting desirable loads entering the market combine to produce this result (fig. 13).



BN-9071

Figure 12.--Starting sales at beginning of a market day.

Each grower is expected to close up behind the trucks in front of him in the sales lane before stopping to sell. Market police patrol the lanes to obtain compliance with this and other traffic regulations. Customarily, the grower then gets out to display samples of the produce and to sell the load. When demand is brisk and several buyers are interested in the products, an informal auction frequently develops. If the load does not attract two or more buyers to bid, the grower makes his sales by dickering with individual buyers.

When the load, or a lot, is sold, the buyer makes out a purchase ticket in duplicate. This notes the commodity, quantity, price, sometimes the grade,

3/ General Code, Art. 12, Sec. 1202.1 (q).

and always the stall number to which it should be delivered. If the entire load has been sold, the grower pulls out of the selling lane into the adjacent passing lane, drives up to 11th Street (or to the end of the selling area), then to the buyer's stall to make delivery. Sometimes the grower delivers one or more lots without waiting to sell the entire load. The grower does the unloading at the platform, and is paid immediately. Season buyers, and other buyers with established credit, generally pay by check; most of the day buyers pay in currency.



BN-9072

Figure 13.--Selling activity moves toward entrances during the day.

As trucks pull out of a sales lane, growers are expected to close up to permit others to enter the market. When a load reaches the end of a lane without being sold, the grower may return to the front of the market along one of the streets flanking the selling area and start again through a sales lane. Return loads are expected to enter the outside lane adjacent to the side on which the return was made. The other six lanes are reserved for growers newly entering the market. Where a partial sale and delivery has been made, the remaining load may also be returned to the head of the selling area and started through one of the outside lanes.

(c) Waiting Lines and Selling Time

Frequently, during peak weeks of the season there may be from 200 to 400 or more trucks in waiting lines before the market opens. Then, on heavy-volume days, additional trucks arrive faster than the waiting growers can enter the market and move through the selling lanes. Resultant back-ups on city streets may thus extend over a mile along two or more important thoroughfares. Ordinarily, even with a brisk market, it takes until after 11:00 a.m. to clear the city streets when total volume is 1,200 to 1,400 loads or

more for the day. With higher volumes or slower demand, the backed-up traffic may still be on the streets well after noon.

Findings in the 1958 survey show that average selling time per load is about 35 minutes, exclusive of time waiting in line outside the market. Individual returns indicate that the actual time required varies widely among growers, for different commodities, and for the same growers and commodities on different days. Extremes range from 1 or 2 minutes to several hours. Among some 140 growers making 75 or more trips to the market per season, weighted average selling time is approximately 25 minutes per load.

Based upon an average overall truck length of 18' and allowing 7' between vehicles for examination of the produce and for selling space, the maximum capacity of the 8 sales lanes (with 11th Street closed off) is 304 loads. In actual operation, spaces in the lanes which are vacated by sold loads are not promptly closed up. Growers behind may be in process of selling their own loads; also they are generally reluctant to move forward when that means moving away from the center of buying activity. Net result is that effective capacity of the sales lanes is not more than 240 loads. Up to 60 additional trucks may be returning to the head of the selling area; 250 more may be delivering or unloading. On occasion, therefore, from 500 to 550 growers' trucks may be somewhere on the market at the same time. Perhaps as many as 250 buyers' trucks and semitrailers might also be on the premises.

(d) Loading Operations

To the extent possible, buyers try to load out for shipment from the market as part of a continuous operation with growers' delivery to the platform. As the produce is unloaded at a stall, it is moved across the platform immediately and loaded into a semitrailer or large van docked on the other side. Generally this handling is done by means of roller or skate conveyors set up 18 to 24 inches above the platform floors. In many instances, the grower must lift his packages to the conveyor from the truckbed. Where not immediately loaded out, produce is stacked across the platform by the buyer's crew.

Most semitrailers and other truck equipment engaged in shipping from the market are owned by the using buyers. Some equipment is the property of trucking companies which contract to handle all hauling for certain buyers. Some is common-carrier equipment with which buyers supplement their own fleets. A few buyers obtain semitrailers through truck brokers.

Fruit in open bushel baskets is sometimes hard to load. This fruit is bought mainly by day buyers who load into their own high stake-body or van-type trucks, or semitrailers. Usually the baskets are tiered on shelves made by laying planks across the body at different levels. Sometimes the baskets are lidded on the platform, with some repacking of high-piled bushels. All of this makes for delay, often holding up several growers who must wait to deliver and unload at the same stall.

(e) Mixed-Load Shipping

A number of buyers at the Benton Harbor market have developed an efficient technique of assembling and shipping out mixed loads of fruits and vegetables. The variety of produce available here at the height of the season provides a first condition for success of this practice. Also, buyers can obtain most of the commodities in large or small quantities as needed to make up different shipments. The short haul to many major consuming centers makes mixed-load shipping from this market eminently practicable.

Typically, these buyers rent several stalls to be assured of adequate platform space. Some produce received from growers is moved directly into outbound trucks, but most of it must be stacked on platforms to provide an inventory for order-picking. At least some of each product needed may have to be bought and received before loading can proceed very far. When enough produce is assembled on the platform, it is loaded according to orders for different accounts, beginning with the one to be delivered last. The shipment of mixed loads lends itself readily to the operation of buyers for service wholesalers, as well as the supplying of food chains and associated retailers. It can be adapted to other types of operation.

(f) Season-Buyer Operations

The number of individual season buyers actually authorized to purchase on the market at any given time is somewhat indefinite. This stems from the fact that buyers are entitled to a purchase badge for each stall rented. The badges are used not only by agents and employees, but also by affiliated buyers. Several of the stalls and platform facilities are used in common by two or more buyers without any legal connection between their businesses. Rental records on such stalls, however, usually are in the name of only one of them.

Subject to these qualifications, the market had 63 season buyers of record in 1959. Number of stalls rented by these tenants ranged from 1 to 9, averaged just under 3, and totaled 215. Distribution of stalls among buyers was as follows:

31 had 1	7 had 4	3 had 7
2 had 2	8 had 5	2 had 8
6 had 3	8 had 6	1 had 9

Season rentals in 1959 were \$125 for the 10' x 14' stalls and \$175 for the 11 1/2' x 20' stalls.

Season buyers do not report purchases, or shipment destinations, to any office on the market. Information corresponding to that below on the operations of day buyers is consequently not available. In the aggregate, season buyers take about 65 to 75 percent of the total quantity of produce bought on the market. Their purchases probably account for a somewhat higher proportion of total dollar volume.

(g) Day-Buyer Activity

Day buyers now pay a flat fee per day, rather than per load as set out in the market regulations. 4/ Any person may register by paying the \$3 fee at the day-buyers' office. A badge is issued which authorizes unlimited purchases during that day. A platform stall is also assigned to the registrant. If the buyer notifies the office when he leaves the market and lists the contents of his load on a slip provided for the purpose, he receives a 50-cent refund.

Day-buyer registrations totaled 5,041 in 1958, the first time that level has been regained since 1953. Ten to 15 years ago, the total registered was usually in the range of 5,200 to 6,800 for the season.

In recent years, registration has seldom exceeded 100 buyers on any day; 125 has been the maximum. Peak attendance occurs during peach and tomato season; patronage at other times is relatively higher than in former years. Average daily attendance was 37.4 buyers in 1957 and 39.1 buyers in 1958. In each of these years, fewer than 40 day buyers were on the market nearly two-thirds of the time. More than 80 were registered for 10 to 12 percent of market sessions. Following is an analysis of attendance in each of the two seasons:

Number of day-buyer registrations at the market	1957			1958		
	Number of days buyers were registered	Percentages of total days market was open		Number of days buyers were registered	Percentages of total days market was open	
	Days	Percent		Days	Percent	
1 - 19.....	46	37.4	:	40	31.0	:
20 - 39.....	35	28.5	:	43	33.3	:
40 - 59.....	11	8.9	:	12	9.3	:
60 - 79.....	15	12.2	:	22	17.1	:
80 - 99.....	14	11.4	:	8	6.2	:
100 - 119.....	2	1.6	:	4	3.1	:
Total.....	123	100.0	:	129	100.0	:

A detailed analysis of day-buyer registrations and load reports recorded by the market during the 1957 season was made for this study and is presented in appendix C. This information is regarded as a typical statistical picture of the activities of day buyers. Following are some summary findings: Most day buyers came from Michigan, but Indiana buyers came most frequently and thereby accounted for about the same number of registrations. About 45 percent of all buyers came from these 2 States; another 45 percent were from the next 6 States; in all, 25 States were represented by day buyers on the market. Attendance averaged 5.7 days; individual patronage ranged up to 75 days. Average number of items purchased was 3.7; average load was the equivalent of 134 bushels.

4/ General Code. Art. 12, Sec. 1202.1 (m).

(h) Finances

Total market revenues exceeded \$90,000 in 1957 and again in 1958. Principal sources of this income and the amounts received from each are set out in table 6. Growers' fees of almost \$36,000 constituted nearly 40 percent of the average total. Buyers' rentals and registration fees combined amounted to \$34,000 and 37 percent. Season-buyers' rentals made up about two-thirds of this revenue. Net income of the migrant labor camp averaged almost \$8,000, but was significantly lower in 1958 than in the previous year. Income of \$4,600 from the retail section in 1958 was well above 1957 following an increase in rentals. Income from building rentals was also up, but receipts from automatic scales declined. Miscellaneous revenues, consisting of the items noted in the table, were up 50 percent to about \$2,400.

Table 6.--Revenues of the Benton Harbor Fruit Market in 1957 and 1958

Source	1958	1957	1957-58 average	
			Amount	Percentage of total
	Dollars	Dollars	Dollars	Percent
Growers' entrance fees.....	36,261	35,441	35,851	38.8
Season buyers' rentals.....	21,450	22,290	21,870	23.7
Day buyers' fees.....	12,632	11,764	12,198	13.2
Migrant labor camp <u>1</u> /.....	7,325	8,606	7,966	8.6
Retail section.....	4,600	3,680	4,140	4.5
Building rentals <u>2</u> /.....	5,885	5,366	5,626	6.1
Automatic scales receipts...	2,410	3,190	2,800	3.0
Miscellaneous <u>3</u> /.....	2,350	1,632	1,991	2.2
Total.....	92,913	91,969	92,442	100.0

1/ Net to the market after deducting operating expenses.

2/ The restaurant, the Federal-State Inspection Service office building, and the offices in the administration building which are leased to Michigan State agencies.

3/ Includes storage receipts, resale load fees, sales books proceeds, and other sources.

Growers paid fees on an average of 88,300 loads in the two seasons. For roughly 60 percent of the loads in each year the fee was 50 cents per load (26 or more packages); for the rest, the fee was 25 cents. Table 7 shows

how this division compares with that in previous seasons during the past 20 years. It also points up the relationship between gate fees and growers' receipts over the period. In 1958, the aggregate of fees paid by growers for the use of the market amounted to less than four-tenths of 1 percent of total dollar sales.

Table 7.--Entry fees paid by growers on the Benton Harbor Fruit Market and their relationship to gross receipts from sales, 1938 through 1958

Year	Number of loads for which the fee was -				Total loads	Total entry fees	Entry fees Growers' as a total percentage of growers' receipts	
	10 cents	25 cents	50 cents					
	: : 1,000	: : 1,000	: : 1,000	: : 1,000			: : 1,000	: : receipts
	: : loads	: : loads	: : loads	: : loads		: : Dollars	: : dollars	: : Percent
1938...	96.8	-	-	96.8		9,684	3,156	0.31
1939...	134.2	-	-	134.2		13,420	3,817	.35
1940...	113.7	-	-	113.7		11,368	3,750	.30
1941...	108.7	-	-	108.7		10,865	4,256	.26
1942...	106.0	-	-	106.0		10,600	6,162	.17
1943...	106.0	-	-	106.0		10,604	8,008	.13
1944...	88.4	-	-	88.4		8,846	7,569	.12
1945...	59.2	-	-	59.2		5,920	4,973	.12
1946...	92.6	-	-	92.6		9,263	9,362	.10
1947 1/	50.8	44.4	-	95.2		16,181	8,387	.19
1948...	48.5	39.5	-	88.0		14,724	6,985	.21
1949...	49.8	47.6	-	97.4		16,886	6,745	.25
1950...	54.0	56.1	-	110.1		19,426	9,768	.20
1951...	52.6	35.7	-	78.2		13,171	6,189	.21
1952...	44.0	51.7	-	95.7		17,340	8,389	.21
1953...	40.0	49.6	-	89.7		16,411	9,116	.18
1954...	32.0	45.9	-	77.9		14,675	7,572	.19
1955 1/	-	39.2	45.8	85.0		32,706	9,089	.36
1956...	-	29.7	50.4	80.2		32,653	8,635	.38
1957...	-	33.4	54.1	87.5		35,412	9,698	.37
1958...	-	33.1	56.0	89.1		36,261	9,545	.38

1/ Before 1947, the nominal entrance fee of 10 cents was paid on all loads. Beginning that season, loads of 26 or more packages were charged 25 cents. In 1955, the fees were raised to 25 cents and 50 cents, with 20 percent of total gate receipts earmarked for advertising and promotion of area products. (For 1959, a third classification was established. On loads exceeding 100 packages a \$1 entrance fee was paid.)

Operating expenses of the market in 1957 and 1958 averaged almost \$54,000. Principal items of expense are set out in table 8. Personal services accounted for \$33,500 or 63 percent of the total. Staff of the

market in 1958 consisted of four office employees, the manager, two full-time and one part-time gatemen (fee collectors), two policemen, two maintenance men, and two watchmen. Compensation of the supervisor in charge of the migrant labor camp is not included; it was deducted before showing the net revenue figure in table 6. Supplies and services (13 percent) and utilities (10 percent) were the only other items of operating expense amounting to as much as one-tenth of the total in these years.

Table 3.--Operating expenses, depreciation allowance, and other expenses of the Benton Harbor Fruit Market in 1957 and 1958

Item	1958	1957	1957-58 average	
			Amount	Percentage of total
	Dollars	Dollars	Dollars	Percent
Personal services <u>1/</u>	36,604	30,416	33,510	62.5
Supplies and outside services.....	7,508	6,275	6,892	12.9
Utilities.....	5,260	5,297	5,279	9.8
Maintenance and repairs.....	3,661	2,154	2,908	5.4
Insurance and interest.....	1,633	1,586	1,610	3.0
Miscellaneous.....	<u>2/</u> 3,868	2,965	3,417	6.4
Total operating expenses.....	<u>58,534</u>	<u>48,693</u>	<u>53,616</u>	<u>100.0</u>
Depreciation allowance.....	13,166	12,422	12,794	53.0
Advertising and promotion.....	6,526	9,088	7,807	32.3
Dues, subscriptions, and donations	<u>2,450</u>	<u>4,550</u>	<u>3,500</u>	<u>14.7</u>
Total other expenses.....	<u>22,142</u>	<u>26,060</u>	<u>24,101</u>	<u>31.0</u>
Grand total.....	<u>80,676</u>	<u>74,753</u>	<u>77,717</u>	<u>100.0</u>

1/ Retirement contributions of \$1,544 in 1958 and \$946 in 1957 added in with salaries and wages.

2/ Includes \$1,476 for rental of trucks and equipment.

Depreciation charges on existing facilities averaged \$12,800 in the 2 years. The market also allocated \$9,000 in 1957 and \$6,500 in 1958 to the general advertising and promotion program for area products. Other

subscriptions and donations (including that for the local festival "Blossom-time") averaged \$3,500. Residual revenue in these two seasons was paid on outstanding obligations, disbursed as capital expenditures, or credited to market account in the Benton Harbor general fund.

4. SHORTCOMINGS OF THE PRESENT MARKET

Apart from the basic disadvantage of blocking economic development of this section of the city, the Benton Harbor market as now located has several shortcomings. The principal ones relate to (1) the traffic burden it places upon city streets, with consequent congestion, interference, and incidental hazards, (2) the space limitations of the present site, (3) the inadequacies of existing platforms, and (4) other drawbacks and deficiencies.

(a) Traffic Problems and Hazards

A look at figure 2 in section 2(b) points up the first drawback of the market as presently situated. The map shows that the market is in the extreme northwestern corner of the city, practically in the business district. Technical studies and trade experience have demonstrated that such locations are undesirable even for city wholesale markets. They are even more disadvantageous as a site for farmers' assembly or concentration-type facilities. These facilities require ready accessibility from producing areas with ample space to receive supplies and to load out shipments to major consuming centers.

The location of the Benton Harbor market is especially undesirable because of the geography of the area. Traffic flowing to and from the market must cross either the entire length or width of the city, or the full length of the adjoining city of St. Joseph. Including the equipment for transporting buyers' loads, approximately 200,000 trucks must pass through the city each season going to or from the market. It is unnecessary to point out the toll this traffic load takes on streets and the accident hazard inherent in so many passings through intersections and in front of schools and churches. (Sunday is usually the first or second most active day of the week.)

On days of heavy volume, growers' trucks arrive at the market more rapidly than they can enter. As a result, traffic backs into waiting lines that extend along different streets, including several blocks of the main business street. In addition to interfering with nonmarket traffic, and to blocking access to business houses and residential driveways, these lines entail expense to the city because intersections must be policed to keep them clear (see fig. 14). In effect, therefore, the operation of the market in its present location requires the use of some of the most important thoroughfares in the city as holding or staging areas for the marshaling of growers' trucks.

(b) Space Limitations

When the present market was built in 1930, most buyers were using short stake-body or van-type trucks. The few semitrailers then used in the Benton

Harbor market were likewise substantially shorter, on the average, than those in service today. Docking space off Market and Bond Streets was designed to accommodate these smaller trucks. The 24-foot depth from curb to platform is entirely too shallow today. Even with tractors jackknifed, most semitrailers now used by buyers in this main section of the market extend halfway across the adjoining streets (fig. 15). Resulting congestion and interference with passing traffic is especially critical on the Market Street side when semi-trailers are backed up to the plant across the way (fig. 16).



BN-9073

Figure 14.--Trucks lined up on Ninth Street near market entrance.

There is insufficient space also on the inside of the buyers' platforms flanking the sales lanes of the main market area. Here a 40' strip is used for three purposes which frequently interfere with each other. This strip serves as a street on which growers drive to the stalls of buyers to make delivery; it is the return lane on which unsold loads go back to the head of the sales lanes; and it is the docking area in which growers' trucks back up and stand to unload. Too often, on big days, either the return loads accumulate and begin to back up in these strips, or loads for a particular buyer will arrive faster than they can be unloaded, with the result that the street becomes blocked and the operations of other buyers are dislocated.



BN-9074

Figure 15.--Shallow docking space causes trucks to encroach on city streets.



BN-9075

Figure 16.--Congestion on Market Street during loading hours.

(c) Platform Inadequacies

With a width of only 14 feet for most of the platforms, it is not possible to assemble a full semitrailer load in the 10-foot stalls. Products

must be stacked in adjacent stalls while awaiting a truck, or procurement of the proper mixed load. Out-of-line handling is then involved with consequent cost increases (fig. 17). The additional handling is especially costly at Benton Harbor where gravity conveyors constitute practically the only handling equipment employed. The narrow platforms likewise do not easily accommodate an office with sufficient work space inside as well as a safe walkway past it or to a door at the end.



BN-9076

Figure 17.--A 14-foot buyer platform stacked to capacity.

Wooden floors of the platforms are rather uneven, and tend to develop splinters in the course of hard usage. They likewise prevent the efficient use of handling equipment. The platforms generally lack steps. Ladders attached to most of them are inconvenient and somewhat hazardous to use.

Buyer platforms along the selling area are the original structures erected in 1930. They are all wood with cedar posts. Because of settling, filling, and paving, an initial height of 30" above grade has been cut to about 24" generally. This leaves the platform levels so far below trailer-bed heights as to preclude the use of palletizing and other unit-load

principles. Shed roofs are low and have only 2' overhangs (in contrast to the 3' to 6' canopies on the newer platforms). As the roofs are supported by posts on the edge of the platforms, they are subject to damage from backing trucks.

(d) Other Deficiencies

The present market has some minor deficiencies that may be summarized. Toilet facilities are manifestly inadequate. More telephones, enclosed for privacy, are needed along the selling area. Because parking space is extremely limited, trucks are left in the sales and return lanes and in docking areas to the detriment of operations in these places. Surplus water from the hydrocooling operations requires proper disposal. There are no banking facilities at or near the market. With most transactions being handled by check, ready access to a bank would be a service to the growers.

5. FACILITIES NEEDED AT A NEW MARKET

The alternate objectives of this study are to determine whether the Benton Harbor Fruit Market should be (1) improved or rebuilt on its present site, or (2) reconstructed at another location. The foregoing analysis of existing facilities and operating methods shows that improvement on the present site is not feasible. Because of space restriction, any significant improvement in the present market would require closing Bond Street and rebuilding the older platforms further from the sales area. This would entail much of the cost with little of the savings or other benefits expected to accrue from rebuilding at a better location. The remainder of this report, therefore, considers the economic feasibility of relocating the market. This conclusion is in accord with the recommendations of the Comprehensive Area Plan developed in 1955. (Appendix D).

Any new market proposal for Benton Harbor should include well-considered plans regarding the site, the number and type of platform facilities required, the kind and the scope of service and supporting facilities desired, and an efficient layout of all such facilities, tailored to the site.

(a) Possible Sites

One logical location for a new concentration-point fruit and vegetable market for Benton Harbor would be in the general area 4 to 7 miles east of the present market site. This is near the geographical center of those farms presently furnishing the market with most of its supplies, if the distribution shown in figure 18 is representative. It is likewise the general area most frequently mentioned by some 57 growers in the survey who recommended relocation of the market. The city has authority to acquire land beyond its own limits.

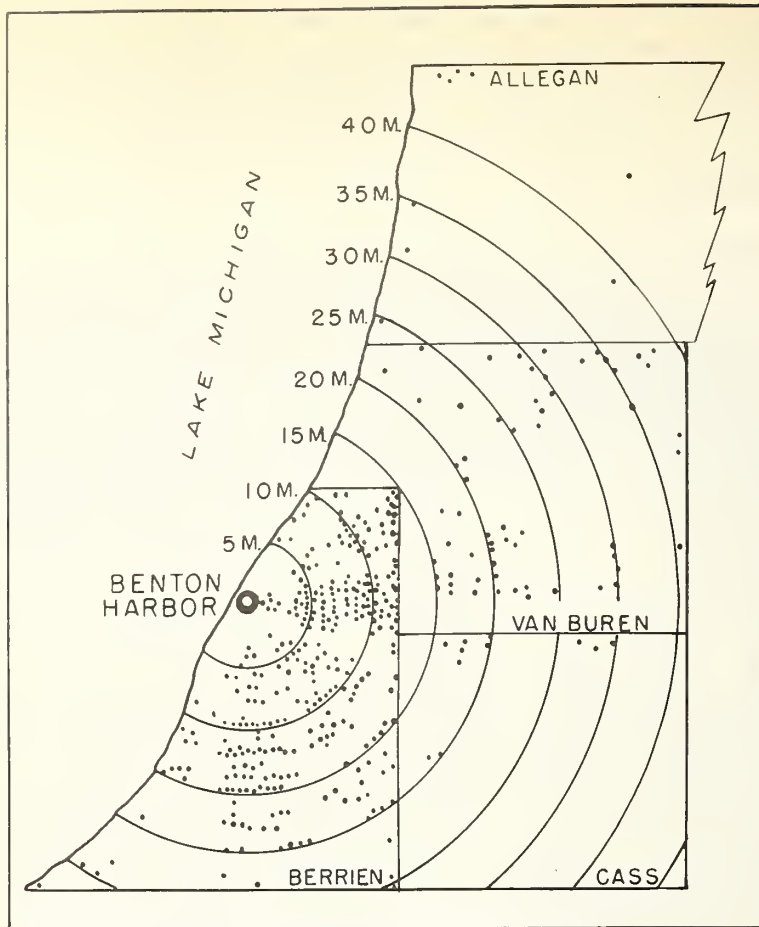


Figure 18.--Farm locations of growers who use the Benton Harbor Fruit Market and who responded to the 1958 survey.

This location is in the heart of the heaviest-selling area now patronizing the market. Out of 27,500 growers' loads covered in the survey, almost 6,500 loads, or about 24 percent, were from this general vicinity. Ranking next in importance as centers of supply are Coloma and Watervliet to the northeast, and Berrien Springs, Sodus, and St. Joseph to the south and southwest. The proposed location would be convenient of access from all of these producing areas. Growers at Coloma, Watervliet, and St. Joseph could utilize the new Interstate Highway 94 for most of the trip. Some use of the new road also could be made from the other sections.

A suitable tract along the extensions of Highland, Britain, or Empire Avenues, beyond Benton Center Road, would be desirable, possibly within 1 to 2 miles of the Main Street interchange with Highway 94 (fig. 2). Buyers hauling from the market in heavy trucks and semitrailers could expedite their shipments to destination from this location.

Another area that should provide a satisfactory site is the vicinity of the Pipestone interchange on Highway 94. A tract might be bought there off

Meadowbrook Road or Sodus Townline Road. While not as centrally located as the Main Street interchange area, a site in this vicinity could probably obtain a rail connection with the New York Central line if tenants or purchasers of market property wanted it.

The specific site selected should be well drained and reasonably level. It should have a subsoil suitable as a base for heavy-duty surfacing. These requirements have obvious bearing on net cost of land in condition to build. A roughly square tract of at least 55 acres would be needed to accommodate the market facilities initially required, to provide space for expansion, and to enable the project to control its bordering areas.

(b) Selling Lanes

The method of sale currently employed at the Benton Harbor Fruit Market is regarded as the most practicable system for the volume and the variety of produce handled by its facilities. This method is recommended, therefore, for continued use in any new market. While several modifications of the sales method were suggested by growers in the 1958 survey (see appendix A), the conclusion is that no other plan, or material change in the present method, could handle the volume as efficiently and as economically as it is now handled.

Accordingly, the selling area of a new market might well be modeled after that of the present market. All lanes might be widened to 12' for greater safety, but otherwise the number and pattern of the sales and passing strips could simply duplicate the present arrangement (see section 2(c)). With the establishment of a holding area outside the gates, as described below, the length of the selling lanes could be reduced by 150'. The sales area would then be approximately 160' x 750' and would accommodate 240 vehicles.

(c) Buyer Platforms

Seven 20' x 400' buyer platforms would be needed in a new market. With stalls 10' wide, these would provide a total of 280 buyer units. Estimated space requirement of season buyers is 180 stalls, or 4 1/2 platforms. This was determined by roughly equating present square footage of space occupied by large buyers. Needs of small buyers were estimated on the basis of minimum number of stalls.

It is suggested that stalls assigned to season buyers be so distributed as to leave one or two vacant units between large buyers and between every two renters of one or two stalls. This will allow individual dealers to expand without relocating and will also make it convenient for any buyer to use an extra stall occasionally for the day. To the extent that congestion and interference among buyers is thereby reduced, it will likewise facilitate unloading and loading out. When not reserved on any given day by the adjacent season buyers, these vacant stalls would be available for assignment to day buyers.

About 100 platform stalls not rented for the season will be available for assignment by the day. During peach season, however, about 25 of these stalls will be taken over for hydrocooling operations. Since this coincides with the peak period of day-buyer registration, the remaining 75 stalls will not be enough to guarantee 1 to each buyer on every market day (see findings of section 3(g)).

Nevertheless, it is recommended that platform facilities initially constructed on a new market be limited to the seven buildings herein suggested, for two reasons: (1) Most day buyers can make direct truck-to-truck loading when necessary. Many of them might actually prefer to take such tailgate delivery (in assigned spaces of the trailer parking area) provided some lower registration fee would apply. (2) As explained in section 6(c), it would be financially unsound to build more buyers' stalls than the number here suggested without assurance that the additional units will be used often enough to make the larger investment self liquidating.

The suggested design of buyer platforms is shown in figure 19. The floor is a 4" reinforced wire mesh concrete slab for long life, minimum maintenance, freedom from splinters, and suitability for all types of handling equipment. It is laid over a gravel base on dirt fill between 12" concrete walls resting on 24" footings below frost level. Height of the platform is 44" above finished grade. A continuous step 24" wide and 22" high runs the length of the platform on the unloading side and ladders are affixed to the loading side at 40' intervals. In addition to making it convenient to mount the platform at any point, the step should assist growers in unloading from pickup and other light farm trucks. The ladders will be used mainly by truck and semi-trailer drivers. Conventional steps can also be built at the sales area end of each platform. Treated oak bumpers are attached to the platform edge on both sides. The superstructure is of metal with a clad roof and canopies extending 8' on either side. Clearance above finished grade is approximately 13' 6" under each leading edge. This permits loading on either side as the buyer may elect.

(d) Service and Supporting Facilities

Principal service and supporting facilities suggested for inclusion in the project are a restaurant, a motel, an office and bank building, and the control tower and administration building. The day-buyers' office, automatic scales, toilets, communications system, floodlights, fencing, gates, and gatehouses complete the facilities of the market. The migrant labor camp is an adjunct and might be located on the market property but outside the fence.

Suggested dimensions of the restaurant, the office-bank building, and the motel are 40' x 100' each. Two toilet facilities should be housed in the restaurant building. The bank could occupy one end of the office building, using the entire 40' width and 20' of the length of the structure. Four 16' x 20' offices, six 10' x 16' offices, two 10' x 12' toilets, and an 8' x 80' center corridor take up the remainder of that building. Prospective tenants for the offices would include the Michigan State and the Federal Inspection Services, the Federal-State Market News Service, food chain purchasing

offices, trucking companies, and transportation agents, in addition to brokers, buyers, and others.

The motel might have 20 units initially, with provision for expansion, either on ground level or on a second story. Inside dimensions of each unit would be approximately 9 1/2' x 19 1/2'. Study of day-buyer registrations shows that many of them remain overnight in Benton Harbor; several come in on Thursday or Friday and stay for Sunday's market. Season buyers would also be prospective patrons of the motel, especially those coming in to operate during a particular deal. Some might wish to take a unit for office as well as lodging purposes. Truck drivers would find the motel of particular benefit since it would enable them to secure their equipment in a fenced-in and policed area.

The control tower and administration building should be approximately 24' x 24' and consist of two or three stories. If three, the market manager's office could be on the second floor and the staff would occupy the first and the third floors. Direction of police officers, switchboard, and public address operations would be carried on, as now, from the top floor. The first floor would provide space for market publicity, offices for the gatemen, and toilets for market personnel.

In addition to the toilets in the restaurant and the office building, it is suggested that four 12' x 14' facilities be located at the ends of as many buyer platforms adjacent to the sales area. The coin-operated scales at the present market should be reinstalled along the access road outside the fence of a new market in the location indicated in figure 20. The present day-buyers' office could likewise be removed and reconstructed on a new market at the head of the trailer parking area.

Since the market does not operate at night, only a few floodlights are required. These would be in the hydrocooling, tailgate-loading, and trailer-parking areas. Three small gatehouses might be set up, two at the main gates for protection of the fee collectors against sun and rain, the third at the only gate to be opened after market hours. This should be convenient to the scales and should have a watchman on duty throughout the night.

(e) The Layout

A suggested layout of the facilities listed above is shown in figure 20. On the left is the access road leading from Interstate Highway 94. With perhaps as much as 75 percent of the inbound traffic coming from the highway, the layout has been placed on the right side of the access road to expedite entry to the market. A 30' strip running the width of the market property should be reserved for eventual widening of the access road.

Before the market opens each day, as well as any time thereafter when the selling lanes are full, all growers' loads can be channeled into the holding area. This is about 85,000 square feet of pavement beginning at the frontage strip and running in 875 feet to the main gates (G-2 and G-3). It should accommodate more than 500 vehicles in compact waiting lines. The control tower-administration building (C) is between the entrance gates.

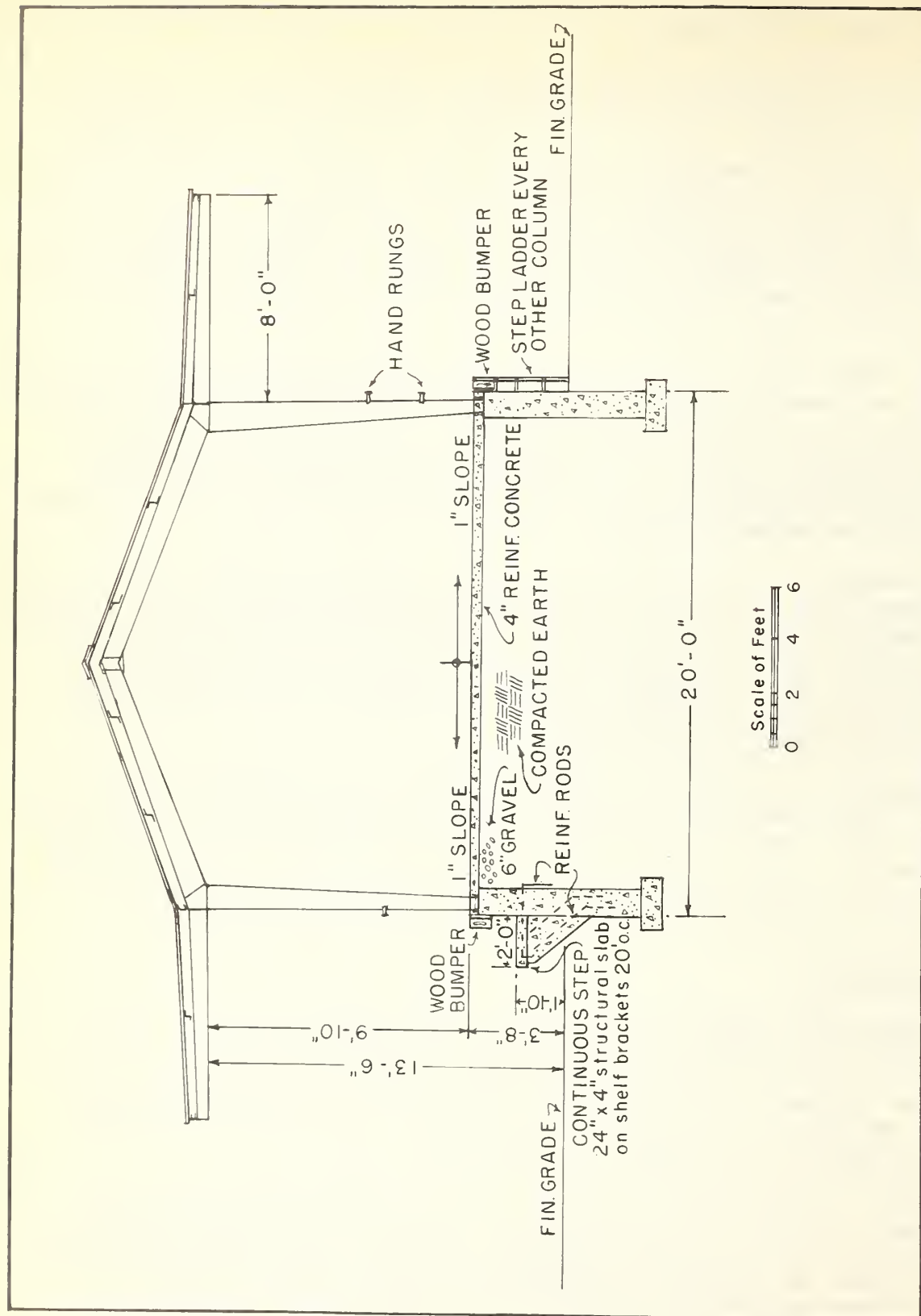


Figure 19.--Suggested design of buyer platforms on a new Benton Harbor Fruit Market.

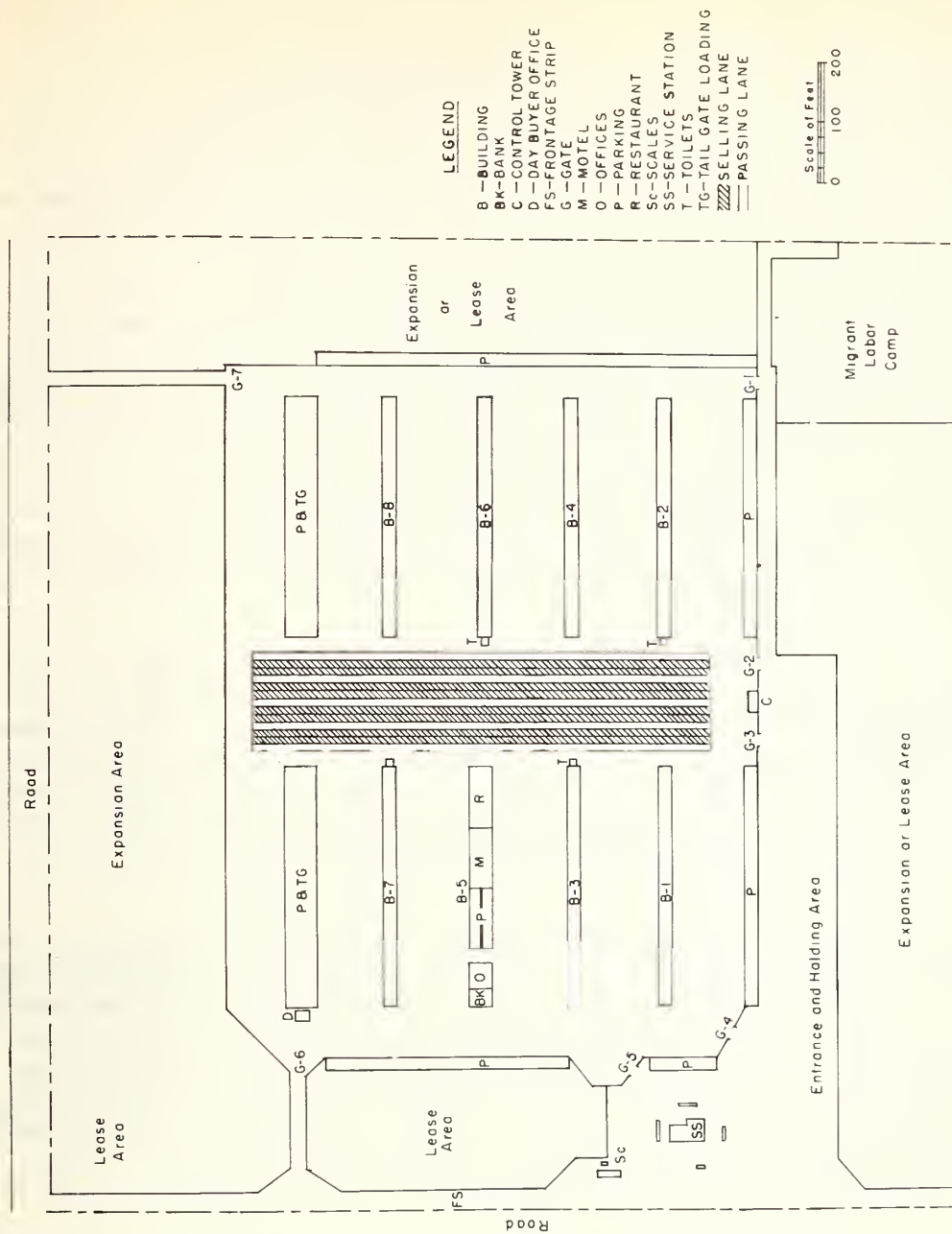


Figure 20.--Suggested layout of a new Benton Harbor Fruit Market.

The seven buyer platforms flank the sales area and run at right angles to it. The streets separating them are 130 feet wide. Toilets (T) are at the sales-area end of buildings 2, 3, 6, and 7. Telephone booths flank the toilets and about the ends of the other four buildings. The day-buyers' office (D) faces gate 6 where most of their vehicles should enter the market and park immediately behind it to await stall or space assignment. The scales (Sc) are in the service station area, just off the frontage strip about midway of the market. They are so located as to facilitate separate-axle as well as entire-vehicle weighings. Parking spaces for growers' trucks and autos are along three sides of the market; trailer parking areas are along the fourth.

This arrangement of market facilities should make for efficient operation. Return loads can be routed right or left off the end of the sales area (or just beyond the platforms if the lanes are not full) to the side streets to make a circuit of four buildings and approach the sales area again. Deliveries should likewise be routed to outside streets, thence to the platform and stall number of the buyer. Unloading can be accomplished there with no interference from or with return loads or sales activity in the main market area. Buyers can load on either or both sides of their platforms without hindering other buyers or growers. Mean walking distance from buyers' stalls to the center of selling activity is less than it would be if the platforms paralleled the sales lanes.

The layout contemplates that season buyers would be assigned stalls in the five platforms nearest to the main gates. Day buyers would first be assigned to stalls on the two platforms which face the trailer parking areas. When these are taken, day buyers would be assigned to vacant stalls on the first five platforms. Buyers who elected to load over truck tailgates (at a lower registration fee) would use any of the regular trailer parking spaces flanking the far end of the selling area. The spaces would be numbered like buyers' stalls to guide growers in making delivery.

After unloading, growers could leave the market by any of the gates except G-2 and G-3 which should be reserved for entrance. Growers wishing to cash checks before leaving could go to the bank by the same outside streets used in making delivery. Cutting through the market across the sales lanes should be permitted only when activity there is very light. Two drive-up windows should be provided at the bank, on the north and east sides, to expedite check-cashing for growers. The gap shown in the drawing between the office building and the parking strips was left to allow growers' trucks coming to the bank from the west side to drive through and approach the windows.

Suggested location of the migrant labor camp is in the right rear corner of the market property. An area approximately 275' x 300' has been delineated for it on the drawing. In this location, growers wanting to pick up help on their return trips can do so conveniently through gate 1, provided they made delivery on that side of the market; if they were coming from the bank, or elsewhere on the market, it would be more convenient for them to leave by gate 4, 5, or 6 and drive the length of the entrance road to the

labor camp. The Michigan State Employment Security Service could set up offices in this area with an adjoining waiting room or open-air pavilion for the workers.

The service station shown in the drawing is 30' x 60' in the long dimension of its "L" shape and 30' x 40' along the base. As laid out, the station has two gasoline islands and two diesel fuel islands. Two of the five gates which buyers' trucks and trailers must use in entering or leaving the market, and growers' trucks in leaving it, open off the service station. With buyers' trucks making 20,000 to 25,000 visits to the market each season and growers' trucks making over 80,000 trips, a service station might be a profitable supporting facility; but the 5-month market season and the fact that most growers maintain their own gasoline supplies raises a question in this regard. For this reason it has not been included among the facilities comprising the total project investment. It is shown on the layout, however, to point up the possibilities of this location to oil companies which might be interested in a ground-rent arrangement for this part of the property.

Similar arrangements possibly could be made for the other parcels indicated as reserved for lease along the front of the market. Prospective tenants include food wholesalers, container dealers, chainstore and retail association warehouses designed especially for assembling and forwarding mixed loads, and various other businesses. Food processing establishments that might wish to set up a plant in conjunction with the market would probably find the areas back from the road, indicated as reserved alternatively for expansion or for lease, more desirable for their purposes. One or more season buyers might also want to build a packing or hydrocooling plant with storage facilities in this location where fruit could be received directly in addition to supplies purchased on the market.

Finally, the layout contemplates that expansion should logically be by extension of the selling lanes. Platforms can be added in this direction as needed. The restaurant, motel, and office facilities in the left file of buildings have been so located as to bring the whole complex into balance when another pair of platforms is constructed. Trailer-parking and tailgate loading areas would be moved back, of course, with extension of the pavement. The day-buyers' office can be moved intact. The area reserved here for expansion is about 40 percent as large as the area laid out for initial use in the market proper.

6. ESTIMATED COSTS AND ANNUAL REVENUE REQUIREMENTS

A financial analysis of a proposed new market for Benton Harbor should give consideration to (a) the cost of the project, (b) the annual revenue required to finance such investment and to meet yearly operating expenses, (c) the potential income represented in the respective services to growers and to buyers, and in various revenue-producing facilities, and (d) the financing of the project indebtedness.

(a) Cost of a New Market

Estimated total investment cost of the project outlined in the preceding section would be slightly over \$1 million. About 36 percent of the investment is in the cost of paving alone; 34 percent is in buyer platforms; other buildings account for almost 20 percent of the total. Engineering fees of 6 percent, construction loan interest at 5 percent, and 10 percent contingency are included in these major component estimates. Cost of land in condition to build is estimated at \$1,200 per acre for an aggregate sum of \$66,000.

Detailed costs of all facilities are shown in the engineering estimates of table 9. Unit basis used in calculating the cost of each item is set out wherever applicable. Estimated base cost of construction, including contractors' overhead and profit, is about \$782,000. The percentage increments listed above raise this to \$958,000.

(b) Revenue Requirements

Estimated annual revenue requirements of a new market built as described above would be approximately \$151,000 for the first 11 years. This amount consists of two major components: Debt service charges and operating expenses. A reserve fund is included in each.

In estimating annual debt costs, it is assumed that the city would credit the new market project with some portion, at least, of the present market value. For this analysis, \$200,000 is taken as the amount of credit, representing the approximate book value of present market land and land improvements plus the administration building. (Total book value of the market exceeds \$300,000, but the other assets would have little, if any, alternative utility.) The stated credit would be applied to \$958,000, the total cost of facilities, leaving a net indebtedness of \$758,000 on which both principal and interest charges would be due.

A further assumption is that the market would pay only interest charges on the nondepreciable land investment of \$66,000 for the first 5 years. During that period, the debt service reserve (20 percent of annual amortizable debt charges) would be accumulated until fully established at 100 percent of 1 year's obligations. After that, the same dollar amount can be applied each year to retiring the investment in the land, thus paying off that obligation in the succeeding 6 years.

Table 9.--Engineering estimates of investment costs of land and facilities needed in a new Benton Harbor market (1959 basis)

Description of facility	Number of units	Cost	
		Per unit:	Total
		Dollars	Dollars
Paving, bituminous concrete.....	1/120,000 sq. yd.	2.50	300,000
Buyer platforms (7), concrete with steel roofs and columns; 20' x 400' each.....	56,000 sq. ft.	5.00	280,000
Motel, 40' x 100'.....	4,000 sq. ft.	12.50	50,000
Office and bank building, 40' x 100' overall.....	4,000 sq. ft.	10.00	40,000
Restaurant, 40' x 100' overall, incl. 2 toilets 14' x 16'.....	4,000 sq. ft.	9.00	36,000
Control tower and administration building; 3 stories, 24' x 24'; incl. one 6' x 8' and one 8' x 10' toilets....	1,728 sq. ft.	9.50	16,416
Toilets (4), at sales area ends of buildings 2, 3, 6, and 7; 12' x 14' each; 672 sq. ft.....	4 toilets	4,000.00	16,000
Fencing and gates.....	4,160 linear ft.	3.50	14,560
Sewers--storm, 3,000 linear ft.; sanitary, 1,500 linear ft.....	4,500 linear ft.	1.90	8,550
Migrant labor camp (removal from present site and re-erection).....	-	-	6,000
Communications system (switchboard, telephone booths, and public address system).....	-	-	5,000
Scales and automatic scale house (removal and reinstallation).....	-	-	4,000
Floodlights (10, in hydrocooling, tailgate loading, and trailer-parking areas only).....	10 floodlights	300.00	3,000

1/ Approximate.

Table 9.--Engineering estimates of investment costs of land and facilities needed in a new Benton Harbor market (1959 basis) Continued

Description of facility	Number of units	Cost	
		Per unit	Total
		Dollars	Dollars
Day-buyers' office (removal and reconstruction).....	-	-	2,000
Gatehouses (3), one each at gates 2, 3, and 6, 5' x 8'	120 sq. ft.	7.50	900
Base cost of construction.....	-	-	<u>782,426</u>
Architect's fee, 6 percent.....	-	-	<u>46,946</u>
			<u>829,372</u>
Construction loan, 5 percent...	-	-	<u>41,469</u>
			<u>870,841</u>
Contingency fund, 10 percent...	-	-	<u>87,084</u>
Total estimated cost of facilities.....	-	-	<u>957,925</u>
Land.....	55 acres	1,200.00	66,000
Grant total of investment cost.	-	-	1,023,925

With these starting assumptions, annual debt service charges of the new market would be approximately \$68,500, predicated upon 5 percent interest and a 25-year amortization schedule. This annual amount is made up of:

Principal and interest payments on \$758,000 at \$70.95 per \$1,000.....	\$53,780
Interest payments only on \$66,000 at 5 percent <u>1/</u>	<u>3,300</u>
Subtotal.....	57,080
Debt service reserve (20 percent of annual debt payments) <u>2/</u>	<u>11,416</u>
Total.....	68,496

1/ This amount would be fixed for the first 5 years while the debt service reserve is built up to a full 100 percent. After that, it would be progressively reduced by payments on principal until eliminated after 11 years.

2/ This item would be maintained in market accounts for the first 5 years until the accumulated reserve is equivalent to 1 full year's interest and amortization charges. The amount can then be applied toward reduction and progressive liquidation of the land indebtedness.

Total annual operating expenses of the market are estimated at \$82,467. Major elements of expense are \$40,000 for personal services and about \$35,000 for other costs. A breakdown of these main components is shown in table 10. A 10 percent contingency reserve is set up in this operating-expense budget.

Table 10.--Estimated operating expenses and contingency reserve of a new Benton Harbor fruit market

<u>Personal services</u> <u>1/</u>	\$40,000
Manager	
Assistant manager	
Office staff (3)	
Gatemen (4)	
Policemen (2)	
Watchmen (2)	
Maintenance (2)	
 <u>Other costs:</u>	
Taxes <u>2/</u>	\$10,000
Utilities.....	7,500
Supplies and services.....	7,000
Maintenance and repairs <u>3/</u>	3,770
Insurance <u>4/</u>	1,500
Postage and office supplies.....	1,200
Rent of truck and equipment.....	1,000
Accounting service.....	500
Miscellaneous.....	<u>2,500</u>
Total other costs.....	<u>34,970</u>
 Total operating expenses.....	\$74,970
 Contingency reserve (10 percent of operating expenses).....	<u>7,497</u>
 Grand total, operating expenses and reserve.....	82,467

1/ Including retirement and Social Security contributions.

2/ Or payment in lieu of taxes (1 percent of total investment).

3/ Based on 1/2 percent of base construction costs.

4/ Based on 80 percent coverage of building costs against fire, windstorm, etc., at \$1.25 per \$1,000; \$500,000 of public liability and \$25,000 of property damage at \$1.75 per \$1,000.

The inclusion of taxes and both contingency and debt reserves in the new market estimates, coupled with the exclusion of advertising, dues, subscriptions, and donations, which appear in the financial reports of the present market, make a comparison of the two somewhat difficult. Subject to this qualification, corresponding items are shown in table 11 together with noncomparable annual expenses. The \$150,963 total estimated as required to be expended or placed in reserves for a new market compares with the approximate \$92,400 average revenue for 1957 and 1958. More than two-thirds

of the difference, however, consists of capital investment in the form of principal payments on project indebtedness or the establishment of reserves which ultimately should be applied to the same end.

Table 11.--Major expense and capital cost items in budgets of present and proposed Benton Harbor markets

Item	: For present : market <u>1/</u>	: For proposed : market
	: <u>Dollars</u>	: <u>Dollars</u>
Corresponding items:		
Personal services.....	: 33,500	: 40,000
Supplies and services.....	: 6,900	: 7,000
Utilities.....	: 5,300	: 7,500
Maintenance and repairs.....	: 2,900	: 3,770
Insurance.....	: <u>2/ 1,600</u>	: 1,500
Miscellaneous <u>3/</u>	: <u>3,400</u>	: <u>5,200</u>
Total.....	: 53,600	: 64,970
Noncorresponding items:		
Depreciation.....	: 12,800	: -
Interest and amortization.....	: -	: 57,080
Debt service reserve.....	: -	: 11,416
Advertising, promotions, donations, etc.	: 11,300	: -
Taxes (or payment in lieu thereof)....	: -	: 10,000
Contingency reserve.....	: <u>-</u>	: <u>7,497</u>
Total.....	: <u>24,100</u>	: <u>85,993</u>
Combined total.....	: 77,700	: 150,963

1/ 1957-58 average (rounded off from table 8).

2/ Includes a small amount of interest.

3/ Postage, office supplies, truck rental, accounting service, etc.

(c) Sources of Income

Three principal sources of income are available to the new market: Growers' fees, buyers' rentals and registration fees, and the revenue from supporting facilities. Since the income potential represented in the third source is limited by what the businesses in them can be reasonably expected to yield, it may be considered first. The other two can be adjusted to furnish the remainder of the revenue required.

Owing to the short operating year, facilities such as the restaurant, motel, offices, and bank are not likely to pay their proportionate shares of both debt service and operating expense. Estimated income from each is presented in budget form in table 12. In the aggregate, income from these

four facilities is tentatively estimated at \$8,800. Since they represent a collective estimated investment of more than \$150,000, anticipated revenue from the four combined is actually less than their allocable debt service cost. Nevertheless, each is considered important to the longrun success of a market so located, and it is recommended that they be included in the project even though individually not self supporting.

Table 12.--Revenue requirements and sources of income of a new Benton Harbor Fruit Market

Revenue requirements:

Debt service charges and reserve.....	\$68,496	
Operating expenses and reserve.....	<u>82,467</u>	
Total revenue requirements.....		\$150,963

Sources of income:

Growers' fees (1 percent of \$8 million).....	80,000	
Season-buyer stall rentals (180 at \$180).....	32,400	
Day-buyer registration fees (4,700 at \$3.50)....	16,450	
Migrant labor camp (net).....	7,500	
Restaurant.....	3,000	
Motel.....	2,800	
Hydrocooling rentals.....	2,000	
Scales.....	2,000	
Offices.....	2,000	
Bank.....	1,000	
Miscellaneous.....	<u>1,813</u>	
Total income resources.....		\$150,963

Administration of the migrant labor camp, on the other hand, should continue to net the market about \$7,500 per year, an excellent return on this investment even if its removal and re-erection should prove more costly than was here estimated. Other revenue-producing facilities and miscellaneous income should bring in about \$5,000, making the total from this source approximately \$21,000.

The remaining \$130,000 of needed annual revenue would have to come from buyers' rentals or registration fees and from growers' load fees. It is evident from table 6 in section 3(h) that substantial increases over present rates would have to be made on both.

For season buyers, it is suggested that stall rentals average approximately \$180 per unit. This represents a 40 percent average increase per stall unit over the present scale, which averages \$129 per unit. The increase per square foot of platform is from 87 to 90 cents, or only 3 1/2 percent.

For the 180 stalls estimated to be rented to season buyers, total annual income of \$32,400 would be realized from the suggested rate.

Day-buyer registration fees might be increased from \$3 to \$4.50 while maintaining the present 50-cent rebate for filing a consist. A new fee of \$2.50 or \$3, also subject to the rebate, can be established for buyers willing to load their trucks over the tailgate in designated trailer parking spaces. Together, these fees could be expected to average the net \$3.50 per day-buyer registration used for determining probable income from this source. This is also 40 percent above the current net fee. An average of 5,000 day buyers registered at the present market each year from 1948 to 1958. If the same number come to the new market, income from this source will amount to \$17,500. A more conservative estimate of 4,700 registrations yielding \$16,450 was used, however, in the income analysis.

A new market with modern facilities should attract more day buyers over the long term. Opening interest should offset the initial impact of increased registration fees. If market policies are directed toward sustaining this interest and encouraging day buyers to make frequent return visits to the market, attendance should grow from year to year. Some possibilities in this connection are suggested in appendix C.

Initial expansion needs for season buyers are provided for in their assignment of space on five platforms, as outlined in section 5(c). As these needs are filled, the number of stalls available to day buyers will be correspondingly reduced. At the same time, attendance of day buyers should be increasing. To the extent that it can be managed, these dual pressures for additional platform facilities should be taken care of by means of tailgate loading until a minimum practicable unit of building expansion is justified. This may be considered as 20 additional stalls, or one-half platform. Capital investment in the addition, including necessary extension of pavement, would be approximately \$25,000. Based on the proposed new fee of \$4 (net), and without assessment of any share of operating expenses, the expanded facility would be self-liquidating if its stalls were rented 22 times each, on average, throughout the season.

Growers' load fees paid on entering the market would need to be increased sufficiently to supply the balance of the revenue required by the annual budget. This would be approximately \$80,000, over twice the amount estimated to have been collected in entry fees at the market in 1959. To some degree at least, the imposition of higher load fees can be expected to reduce the overall volume brought to the market for sale. For this analysis, it is assumed that this reduction in volume would be reflected in a decrease in aggregate product value (at constant price levels) from the \$9.5 million level of 1957 and 1958 to around \$8 million. On this premise, a scale of growers' fees averaging 1 percent of the total value of their products would yield the required revenue.

While this is substantially more than the farmers of southwestern Michigan have been paying in the past for use of the Benton Harbor Fruit Market facilities, it is but slightly above the average level of fees at concentration-

point markets in other parts of the country. Table 13 shows that the weighted average fee at nine such farmers' markets in 1958 was 0.9 percent of total product value, or only one-tenth of 1 percent lower than the assessment here required. None of these markets has modern facilities comparable to the project here proposed.

Table 13.--Growers' fees per package: Amount and percentage of value of products at 9 farmers' markets, 1958

Market	Fee per package unit sold	Fee as percentage of product value
	<u>Cents</u>	<u>Percent</u>
A.....	3.0	1.8
B.....	3.8	.7
C.....	2.6	.8
D.....	2.0	.6
E.....	4.2	1.3
F.....	3.5	.7
G.....	5.1	2.0
H.....	5.6	1.8
I.....	<u>2.0</u>	<u>1.2</u>
Average.....	3.2	.9

In setting specific entry fees on different loads, it is suggested that, to the extent practicable, a scale be established that will assess each load with its proportionate share of the total income needed. Apportionment might best be made on a capacity-to-pay basis, determined by the value as well as the size of the load. This will eliminate the disparity inherent in basing load fees on minimum package count only. A possibility in this connection is cited in appendix B. For this study, it is assumed that some scale of fees calculated to yield the necessary residual income of \$80,000 would be put into effect at the new market.

(d) Financing the Debt

A new market for Benton Harbor might be financed by one of several methods. Buyers or growers could form a private corporation and subscribe enough equity capital to enable it to borrow the balance of the total investment required through mortgage or revenue bonds. The growers might form a stock cooperative and secure the benefits of the credit financing available to such producer organizations upon paying in their respective shares. Under a 1956 Michigan statute a market authority could be created by the city, granted the necessary initial capital, and empowered to issue revenue bonds in the amount of the balance needed.

As outlined herein, however, the financing plan contemplates the underwriting of the entire project by the city itself through the issuance of \$1 million of general obligation bonds. This method is considered to be not

only the simplest and least expensive way of making the basic financial arrangement, but also virtually the only practicable means by which the several objectives of the city can be realized. These are understood to include (1) evacuation of the present site to induce economic development of the area, (2) retention of title to present market properties for possible need in an urban renewal program, and (3) continued ownership and operation of the Benton Harbor Fruit Market.

7. SAVINGS AND OTHER BENEFITS REALIZABLE FROM A NEW MARKET

The building of a new fruit market suitably located on the outskirts of Benton Harbor should benefit growers, buyers, and the city itself.

(a) Savings to Growers

Location in one of the areas indicated in section 5(a) would result in a reduction of 6 to 8 miles in the average distance which growers would travel in making a round trip to the market. Whether their mileage was reduced or not, growers would save time by substitution of open highway for congested city travel. The combination of shorter average distance with the elimination of city traffic delay should result in an average saving of at least 10 minutes each way, or one-third hour per grower load.

Further time savings should be realized on the new market in making delivery and unloading. Table 14 shows that this operation required more than 30 minutes on the average for the growers responding to this inquiry in the survey. Growers attributed much of this delay to the congestion, confusion, and tieups connected with the use of the same lanes for delivering, for unloading, and for returning unsold loads to the head of the sales lanes. The platform pattern and traffic flow suggested for use in conjunction with the new market layout should eliminate much of this trouble and result in further time savings, averaging perhaps as much as 10 minutes.

Growers should, therefore, save an average of 30 minutes per load, or one-half man-hour, on each trip to the new market. If growers' time be valued at \$1.50 per hour, this would amount to \$56,250 in the course of a season on the basis of a volume reduced to 75,000 loads from the nearly 90,000-load level of 1958. Additional savings in truck expense, estimated to average 40 cents per trip, would increase this amount by \$30,000 to make a total saving of \$86,250. Total savings growers could realize in a relocated market, therefore, apparently would amount to more than the entire annual bill of producers' entrance fees. By reason of these very substantial benefits, it is considered proper that the grower-users of the new market be primarily responsible for meeting its increased revenue requirements.

The foregoing calculations have assumed that the higher entry fees required to finance a new market would curtail, to some extent, the volume

brought in by growers for sale. While some reduction in volume is probable, especially in the first year or so, it is not inevitable. Moreover, if it should occur, it would not necessarily entail a corresponding reduction in total returns to growers. On the contrary, if the same number of buyers were present to bid for a smaller supply, growers' total receipts might equal or even exceed the aggregate amount that would have been realized with a larger volume. The improvement in prices that might thus be obtained is another possible benefit accruing to growers' from construction of a new market.

Table 14.--Estimated average time required for each operation involved in selling at the Benton Harbor Fruit Market 1/

Operation	Counties					Average <u>2/</u>
	Allegan	Berrien	Cass	Van Buren		
	Minutes	Minutes	Minutes	Minutes	Minutes	
Drive to market area.....	72.1	28.5	50.5	51.1	33.6	
Wait in line to enter.....	14.3	10.0	6.6	8.2	9.7	
Sell the load.....	3/102.9	33.6	28.2	38.3	35.5	
Deliver and unload.....	3/ 51.4	31.4	33.2	30.8	31.7	
Drive back to farm.....	65.7	26.7	44.5	46.7	31.3	
Total.....	306.4	130.2	163.0	175.1	141.8	
Number of growers responding...	7	312	11	67	397	

1/ Simple averages (except where otherwise stated) of individual growers' estimates based upon their own experience as given in the 1958 survey. If the estimates were weighted by the number of times each grower was on the market, most of such averages would be appreciably lower since those producers making most trips usually required less time for almost every operation.

2/ The average for each county was weighted by the total number of trips to the market reported for that county.

3/ Practically all of the growers from Allegan County offered apples and other slow-moving products which are usually sold in small lots necessitating several deliveries.

(b) Benefits to Buyers

Both the day and the season buyers should find the various features of the new market platforms more efficient and more economical for their operations. The additional width should permit assembly of a trailer load within one stall. More inline handling of the produce can then be effected. Both unloading and loading out should be facilitated by the design of platform height on those respective sides. Concrete platforms will permit the use of handling equipment heretofore not practicable on plant floors. Palletizing and other unit-load methods can be employed by buyers shipping to facilities which can advantageously receive such loads. The roof overhangs

should provide some additional protection to both merchandise and men in loading and unloading. Ample docking depth and ready access to and from the open highway should expedite truck movement and shipping operations generally. A fenced-in and otherwise guarded market will provide greater security for equipment overnight and on weekends.

Buyers should likewise realize substantial savings on their trucking costs into and out of a suitably located market. In addition to having easy access to and from the interstate highway and avoiding traffic congestion in the city, buyers would save time in maneuvering into loading position on the wide market streets. A net reduction in turn-around time, at least 20 minutes per trip, should be possible. At \$4 per hour for driver and vehicle (based upon the union scale in the Michigan area and average truck costs), aggregate savings on the approximate 25,000 semitrailer and large van shipments from the market each season would be about \$33,000. Buyers not owning their own trucks should still benefit from these savings through reduction in contract rates.

Certain drawbacks and disadvantages to season buyers, however, should also be mentioned. While a tenant of four or more stalls on the present market could match his square footage of platform space with one or two fewer units of the proposed design, he would then have less linear docking footage on both the loading and unloading sides. Buyers using their present docking length to capacity, therefore, would find this a decisive factor in determining space requirements on a new market. Also, many season buyers have made investments in office facilities on the present market. For the most part, these offices cannot be dismantled and reconstructed satisfactorily on the new market. Salvage value would be relatively small. These factors should be considered in appraising the benefits to season buyers in connection with the proposed project.

(c) Benefits to Benton Harbor

The city should benefit from a relocation of the market on several counts. First, from a broadening of its tax base: Assessment values of land alone in the vicinity of the present market average about 40 cents per square foot. The present market occupies approximately 700,000 square feet of some of the most desirable commercial or light-industrial locations left in the city. At present tax rates, in private hands, it is estimated that this property would yield from \$50,000 to \$100,000 in annual revenue after development of some major portion of its potential. Purchasers might be found who would establish enterprises contributing even more widely to the economic welfare of the city in the form of payrolls and patronage of other businesses.

The tax base of the city might also be enlarged by using the market property as a springboard for a Federal Redevelopment project. It could constitute the municipal share of joint contributions to the program. In this event, not only the market site itself but a much larger adjacent area would be cleared and sold for higher taxpaying uses. With the project completed, aggregate annual tax revenue from the area would be many times that now collected from this section of the city.

Second, the city streets would be relieved of heavy traffic loads to and from the market. Ordinary traffic movement would be freed from the interference which long lines of trucks backed up from the market frequently cause. These conditions have led to congestion and to blocked intersections, driveways, and business establishments. Heavy trailer trucks moving away from the market with full loads have taken a toll of street pavements in their passage through the city. The elimination of more than 200,000 vehicles passing before schools, churches, and along crowded downtown streets should improve city accident and safety records, and encourage the return of business drive away from the central district because of such congestion.

Third, the city would benefit from the removal of the migrant labor camp and its relocation out on the new market property. In providing temporary quarters for these transient workers within the city limits, Benton Harbor has found itself saddled with social, economic, and police problems out of all proportion to the number of persons involved. Somewhat similar conditions exist, in lesser degree, throughout the deteriorated housing area adjacent to the market on the east. If the market were relocated and an urban renewal program inaugurated in this area, many city problems in this connection could be resolved.

APPENDIX A. SYNOPSIS OF THE 1958 GROWER SURVEY

To obtain certain information needed in this study, a survey of southwestern Michigan fruit and vegetable growers was undertaken in late 1958. A questionnaire was mailed out by the Agricultural Agents of Allegan, Berrien, Cass, and Van Buren Counties under sponsorship of Michigan State University. Almost 800 producers responded, of whom some 440 patronized the Benton Harbor Fruit Market. Some 27,500 loads, about 30 percent of all growers' loads sent to the market, were represented in the responses received. The 440 producers individually marketed from 1 to 600 loads per season, averaging 68 loads.

Data were collected on: Acreage of 12 products or product groups; plans to increase or decrease acreage during the next 5 years; proportion of the respective products sold over the market; distance and direction of the grower from the market; usual time required for travel, waiting to enter, selling the load, and delivery and unloading; number of trips made to the market, by months; number and size of trucks used; suggestions for improvement in market facilities or operating methods.

(a) Acreage, Number of Growers, and Products per Grower

Almost 20,000 acres were reported under cultivation by grower-respondents in the survey who utilize the market. About 83 percent of the acreage was in fruits and berries; the remaining 17 percent was in vegetables and melons.

Some 424 growers in the 4-county area furnished acreage figures. Eighty percent of the growers, reporting 70 percent of the acreage, were from Berrien County. Some 16 percent, with 25 percent of the acreage, were in Van Buren County. Allegan and Cass Counties divided the remainders about equally in both acreage and number of growers. These county-participation percentages were more or less constant for the other items of data covered by the survey.

Table 15 shows the detailed acreage data for each of 12 fruit, berry, vegetable, or melon product groups. The composite average was 46 acres per grower with apples (21) and peaches (13) making up more than three-fourths of the total. Average acreage among the Van Buren County growers was 74, half again as much as that reported by Allegan County growers, the next largest. Cass County growers had an average of 44 and Berrien County growers had 41.

More than half of the growers reported that they had some acreage of five or more of the product classifications specified in the survey. Since two were "other" categories, the average number of separate products grown is apparently larger than that shown in table 16. Berrien County growers indicated the greatest diversity of products; Allegan County growers had the least.

Table 15.--Acreage, number of growers, and average acreage of commodities reported by growers responding in the 1958 Benton Harbor Fruit Market survey

Commodity and item	Counties				Total
	Allegan	Berrien	Cass	VanBuren	
Apples:					
Acres	200	3,472	115	1,296	5,083
Growers	6	201	6	33	246
Average acres per grower . .	33.3	17.3	19.2	39.3	20.7
Peaches:					
Acres	57	2,809	56	692	3,614
Growers	5	222	5	38	270
Average acres per grower . .	11.4	12.7	11.2	18.2	13.4
Pears:					
Acres	81	799	11	167	1,058
Growers	6	161	2	24	193
Average acres per grower . .	13.5	5.0	5.5	7.0	5.5
Plums:					
Acres	22	383	5	42	452
Growers	4	135	5	15	159
Average acres per grower . .	5.5	2.8	1.0	3.0	2.8
Raspberries:					
Acres	3	1,020	55	203	1,281
Growers	2	182	10	21	215
Average acres per grower . .	1.5	5.6	5.5	9.7	6.0
Strawberries:					
Acres	1	886	46	508	1,441
Growers	1	165	6	34	206
Average acres per grower . .	1.0	5.4	7.7	1.5	7.0
Grapes:					
Acres	3	1,163	12	451	1,629
Growers	1	180	3	19	187
Average acres per grower . .	3.0	6.46	4.0	23.73	8.71
Other fruits and berries					
Acres	19	1,371	18	483	1,891
Growers	4	160	3	23	190
Average acres per grower . .	4.8	8.6	6.0	21.0	10.0
Total fruits and berries:					
Acres	386	11,903	318	3,842	16,449
Growers	8	336	10	64	418
Average acres per grower . .	48.3	35.4	31.8	60.0	39.4

Table 15.--Acreage, number of growers, and average acreage of commodities reported by growers responding in the 1958 Benton Harbor Fruit Market survey--Continued.

Commodity and item	Counties				Total
	Allegan	Berrien	Cass	VanBuren	
Tomatoes:					
Acres	-	1,184	52	172	1,408
Growers	-	184	7	16	207
Average acres per grower . .	-	6.4	7.4	10.8	6.8
Cucumbers:					
Acres	-	81	8	161	250
Growers	-	33	2	17	46
Average acres per grower . .	-	2.5	4.0	9.5	5.4
Cantaloups:					
Acres	-	218	7	41	266
Growers	-	57	2	7	67
Average acres per grower . .	-	3.8	3.5	5.9	4.0
Other vegetables and melons:					
Acres	1	517	44	736	1,298
Growers	1	79	4	27	111
Average acres per grower . .	1	6.5	11.0	27.3	11.7
Total vegetables and melons:					
Acres	1	2,000	111	1,110	3,222
Growers	1	225	8	42	276
Average acres per grower . .	1	8.9	13.9	26.4	11.7
Grand total, all commodities:					
Acres	387	13,903	437	4,952	19,679
Growers	8	339	10	67	424
Average acres per grower . .	48.4	41.0	43.7	73.9	46.4

Table 16.--Number of principal products grown by farmers using the Benton Harbor Fruit Market in 1958

	: Growers with acreage in specified number of products				
Number of product classifications reported 1/	Counties				
	Allegan	Berrien	Cass	Van Buren	Total
	Growers	Growers	Growers	Growers	Growers
1.	1	7	xx	9	17
2.	1	23	1	8	33
3.	2	33	2	12	49
4.	1	36	2	14	53
5.	2	67	-	9	78
6.	-	66	3	7	76
7.	1	50	2	4	57
8.	-	27	1	3	31
9.	-	15	-	2	17
10.	-	2	-	-	2
11.	-	1	-	-	1
Total growers reporting acreage . . .	8	327	11	68	414
Average number of products	3.8	5.4	5.1	4.0	5.1

1/ Out of the 12 major product classifications covered in the survey. Since two of these were collective classifications which included many less-important commodities, and black and red raspberries were combined, the actual number of individual products grown by farmers using the market is considerably larger.

(b) Truck Census

A total of 571 trucks was reported by 405 growers for an average of 1.4 trucks owned per grower. Roughly 70 percent were light trucks, rated at one-half to 1 ton (generally up to 10,000 pounds G.V.W.--gross vehicle weight). One-fifth were medium-size trucks, usually 1½-ton rating (10,000-16,000 G.V.W.) and one-tenth were larger. Sizes of growers' trucks, as revealed by the survey, had a bearing on platform design, parking space, and dimensions of the selling and holding area as recommended in the report. See table 17.

Table 17.--Size distribution of the trucks used by growers hauling to the Benton Harbor Fruit Market in 1958

Truck size or classification	Counties				Total
	Allegan	Berrien	Cass	VanBuren	
	Trucks	Trucks	Trucks	Trucks	Trucks
Pickup 1/	-	44	2	7	53
1/2 ton	-	111	6	18	135
3/4 ton	3	96	-	21	120
1 ton	-	65	3	13	81
Total light trucks 2/	3	316	11	59	389
Total medium trucks 3/	3	88	3	16	110
Total light-heavy trucks 4/	2	44	3	16	65
Other vehicles 5/	1	6	-	-	7
Grand total	9	454	17	91	571
Average number of trucks per grower.	1.13	1.39	1.55	1.54	1.41
Growers reporting	8	327	11	59	405

1/ Ton rating not otherwise indicated.

2/ Generally up to 10,000 pounds G. V. W.

3/ 1½-ton rating; generally 10,001 to 16,000 pounds G. V. W.

4/ 2-ton and 2½-ton ratings; generally 16,001 to 19,000 pounds G. V. W.

5/ Including trailers, station wagons, and passenger cars.

(c) Growers' Comments on Present Market

The last inquiry in the 1958 grower survey was this general question: "What suggestions do you have regarding possible improvements in the Benton Harbor market facilities or operating methods?" A total of 303 market users responded to this question plus many of the nonusers. Most of the growers commented on more than one subject with the result that there were almost 600 separate observations by respondents actually using the market. Replies are classified in table 18 under necessarily general headings, some of which require explanation.

Buyer practices was the most common subject of comment by growers. It comprehended several things such as alleged agreements not to bid above a certain price; "browbeating" or otherwise attempting to embarrass or intimidate buyers who did not observe, or were not parties to, such agreements; prejudicing the sale with deprecating remarks on quality of the produce or by making unreasonably low initial offers; delaying growers in making delivery and unloading; load splitting, a long-standing source of complaint; and miscellaneous other practices which growers do not like.

Load splitting is the practice by buyers of wanting to divide a lot, or a remaining quantity, after one sale is made. Growers object to it because it eliminates bidding and lends itself to collusive price-fixing arrangements. It also involves multiple deliveries with corresponding loss of time and increased expense. Buyers maintain that it is necessary to split loads to "fill out" and for other reasons. A present market regulation prohibits load splitting except among buyers making an open bid. Growers say that this does not solve the load-splitting problem.

The unloading delays mentioned by growers mainly were attributed to congestion stemming from the three-way use of the return lanes flanking the sales area (see fig. 4 and section 4(b)). The layout of the proposed market should effectively eliminate both the delays and the conditions responsible for them.

Relocating the market was suggested by 57 growers. This is especially significant since the question did not present this possibility and by implication was confined to the present market. (It was generally known, however, that this study was underway.) Practically all of the growers who mentioned a specific area suggested that the market be moved east or southeast of the city. Traffic congestion in the city was a comment usually made in conjunction with the relocation suggestion.

Comments of the growers about being moved from the buying area and being directed into outside lanes were objections to traffic handling in the sales area. However, each has an important implication for planning facilities. The first points to the desirability of shorter sales lanes coupled with the establishment of a holding area. This should enable the market to operate with less pressure on growers and police to make room for waiting growers in order to relieve long traffic lines outside. The second complaint indicates the undesirability of adding to the number of selling lanes; to do so, would apparently only widen fringe areas already being neglected by the buyers.

Table 18.--Summary of suggestions or comments on the facilities and operating methods of the present Benton Harbor Fruit Market, by counties

Suggestion or subject of comment <u>1/</u>	Counties				Total
	Allegan	Berrien	Cass	VanBuren	
	Growers	Growers	Growers	Growers	Growers
Buyer practices	3	43	2	12	60
Unloading delays	-	56	-	3	59
Relocating market	-	51	-	6	57
Load splitting	1	44	-	9	54
Being moved from buying area . . .	-	36	-	5	41
Being directed into outside lanes	-	28	1	2	31
Encouraging day buyer patronage	-	26	-	2	28
Posting price information	-	21	1	6	28
Tighter inspection	-	12	-	5	17
Traffic congestion in city	-	15	-	1	16
Assigning separate lanes by product, type of pack, etc. . . .	-	13	1	2	16
Price stabilization	-	14	-	2	16
Banning open-bushel and unclassified fruit	2	4	1	5	12
All other.	3	115	2	23	143
Total <u>2/</u>	9	478	8	83	578
Number of growers making suggestions or comments <u>2/</u>	6	237	8	52	303

1/ Explained and discussed in subsection (c) of the accompanying text.

2/ Many growers commented on two or more subjects.

It also suggests that, to the extent the holding area makes it possible, all growers initially entering the selling area should have an opportunity to go into one of the six middle lanes, leaving the outside lanes exclusively for "turn arounds".

Some 28 growers suggested that steps be taken toward encouraging day buyer patronage. It was their judgment that day buyers stimulate demand and add the necessary impetus to bidding to make it truly competitive. The same number of growers also suggested a need for posting price information. Frequently, they maintained, market prices are substantially different from the levels most recently reported over the radio. Uninformed of a price rise, they may accept a first offer on entering the market which is well below the prevailing level. Conversely, first offers may be refused by growers unaware of a price decline who must later accept still less for their loads.

The difficulty of collecting and posting accurate specific prices rapidly enough to keep growers currently informed is obvious even before considering the personnel and mechanical problems involved. Use of a holding area, however, should provide some opportunity at least for growers waiting there to be informed on market tone and trend for the products which they have brought in for sale.

Tighter inspection was recommended by 17 growers and the banning of all open-bushel and unclassified fruit by 12 growers. The latter producers were generally of the opinion that such fruit impairs the quality reputation of the whole market and adversely affects the price of graded and packed products. The 16 growers who stated that price stabilization was badly needed mentioned wide fluctuations within the same day and even from hour to hour. No method of stabilizing prices, however, was advanced.

The assigning of separate lanes to different products, or to type of pack, contemplates that growers offering peaches would be in one lane, those with tomatoes in another, those with open-bushel products in a third, and so on. Aside from other disadvantages, it appears that such a system would split buyers into several groups, thereby scattering the market and tending to diminish competitive demand. This same objection must be made to some otherwise interesting suggestions for establishing entrances at both ends of the selling lanes and having two centers of buying activity.

Miscellaneous suggestions, comments, and opinions of growers, totaling 143, were grouped under "all other". These included such things as the use of an auction block for strawberries and possibly other products, increasing entrance fees on larger loads, returning to the original method of sale with growers parked in fixed stalls, setting up packinghouse facilities for small apple and peach growers, fixing minimum prices, and building a new market under ownership and control of growers.

Among participants in the survey who reported that they did not use the Benton Harbor market, the majority of growers stated no reason therefor. Among those who volunteered an explanation, most of the reasons could be classified under one or more of the following typical replies: "Takes too much time;

prices are too low--can do better selling to processors; Benton Harbor is a buyers' market; season buyers run the market; liable to be sent to dead end of selling lanes." Several of the nonusers, however, praised the market and its operation, explaining that they did not use it only because of distance, insufficient volume, a co-op affiliation, or some other cause.

APPENDIX B

CONSIDERATIONS FOR AN APPROPRIATE SCALE OF GROWERS' FEES

The schedule of fees to be established on a new market should be such that growers will bear their equitable shares of the investment cost and the operating expense of the project. Present growers' fees are 25 cents, 50 cents and \$1, depending on number of packages per load.

In determining the scale of fees which growers should pay for the use of a new market, it is suggested that, to the extent practicable, effect be given (1) to the actual number of packages, and (2) to the relative value of loads brought in for sale. That this would be more complicated than the present three-group system is undeniable. Despite that disadvantage, however, some workable approach to such a method is considered essential to avoid magnifying the inequity inherent in a simple package-range basis.

Under the present system, for example, the entry fee for a load of tomatoes in 30 small cartons, which may sell for \$20, is 50 cents, or $2\frac{1}{2}$ percent of its value. In contrast the fee for a load of 20 crates of strawberries, worth perhaps \$100, is 25 cents, or one-fourth of 1 percent of the value of the product. In relation to the respective gross returns, one load is assessed 10 times as much for the use of the market as the other load.

The instances cited approach the maximum disparity between entrance fees on individual loads in relation to sales value. The comparison remains valid, however, although in lesser degree, when based on aggregates and averages. The first 18,000 loads sold at the market in 1958 grossed about \$3.7 million, or somewhat more than \$200 per load. The last 81,000 loads realized approximately \$5.7 million, or about \$70 per load. Since these loads averaged 44 and 56 packages, respectively, the average entrance fee on the latter was obviously larger despite the threefold greater value of the earlier loads.

Other considerations tend to favor the establishment of a fixed fee per load regardless of package count and product value, or the maintenance of the present package-count scale. These are (1) the fact that each truck occupies roughly the same amount of space in the selling area and requires about the same time of market personnel in collecting at the gate; and (2) the relative ease of collecting entrance fees on such basis.

A possible compromise between these opposing considerations may lie in a combination of two methods of charging entrance fees. A fixed fee of 50 or 75 cents per load might be established as a minimum assessment. Loads worth more than 100 times the minimum fee would be charged in accordance with a schedule of entry fees of so much per package of a given product in a certain size

container. This schedule could be worked out by an advisory committee of growers in advance of the season and published by the Market Board. It would necessarily be based upon anticipated general price ranges, and would be subject to progressive revision throughout the season in step with major price changes. The amount paid on a given load at the market entrance would be determined by applying the unit fee then in effect for that commodity and container to the number of packages of such items on the load.

Four gatemen would probably be needed to collect entrance fees on this basis during the opening hours of a market day. Collections could be made in the holding area for perhaps half an hour preceding the start of sales to provide sufficient beginning supplies.

In addition to being an equitable basis for apportioning costs of the market, this fee system might lend itself to the accomplishment of various measures deemed desirable by a majority of the growers. If most producers of a given fruit, for example, as determined by a poll of those using the market, are of the opinion that unclassified or open-bushel fruit adversely affects returns on the graded and packed product, the growers' advisory committee might recommend that the same unit fee apply to both items regardless of the usual price differential. This would tend somewhat to encourage grading and packing of the product.

APPENDIX C. DATA AND SUGGESTIONS REGARDING DAY BUYERS

(a) Analysis of Activities

Findings considered typical of day buyers' operations and activities on the market were made for this report from analysis of some 4,200 load reports recorded in the 1957 season.

Approximately 800 different firms or individuals patronized the market as day buyers in 1957. Perhaps a dozen of the season buyers also registered to obtain an extra stall on occasion. Of the total, 732 buyers filed load reports which provide the basic data for this analysis.

As would be expected, Michigan leads all 25 States in number of different buyers coming to the market. More than a fourth of all registrants came from within the State. Buyers from Indiana made up about a fifth of the total, but came more often and thus accounted for practically the same total registrations. Illinois was the home address of 12 percent. West Virginia, Ohio, Tennessee, Kentucky, and Missouri were the next most important States of origin in that order; collectively, they represented 27 percent. The remaining 13 to 14 percent came from the 17 other States listed in table 19.

Day buyers as a whole patronized the market 5.7 times on average in 1957. Indiana buyers averaged 8.1 days on the market; Ohio buyers attended 5.7 days, Michigan 5.5, Illinois and West Virginia 5.4 each. Individually, attendance ran as high as the 75 days that one Michigan buyer was present. Indiana had a buyer who attended 59 days. Highest individual registration from other

States was 30 from both Tennessee and from Kentucky. Seven buyers in 1957 and nine in 1958 patronized the market 40 times or more in the course of the season. These buyers paid as much for the 40 or more market sessions, at the net registration fee of \$2.50 as season buyers paid for 5 months' use of stalls of the same size. This fact has significant implications which are discussed in the next subsection.

The average number of different commodities purchased by day buyers in 1957 was 3.4. West Virginia buyers, as a group, took the greatest variety, averaging 5.3 items per load. Oklahoma buyers were next at 4.5 items. The big, nearby States of Indiana at 3.2 items and Michigan at 3.0 items were below the overall average. Individually, buyers averaged up to 11.0 different commodities per load; some single loads contained more than 20 separate commodities.

Table 19.--Activities of day buyers at the Benton Harbor Fruit Market by States, 1957 season

State	: Number of:		: Days at market		: Average number of com-	
	: buyers	: registered:	: Average	: Maximum, any buyer:	: modities bought per day	
					by--	
					: Each buyer	: Largest buyer
Alabama.. . . .	12	:	2.5	8	2.7	4.5
Arkansas.. . . .	12	:	2.0	7	3.2	4.6
Florida.. . . .	3	:	1.7	2	3.2	4.0
Georgia.. . . .	6	:	2.0	4	3.2	5.0
Illinois.. . . .	87	:	5.4	25	3.5	7.0
Indiana.. . . .	143	:	8.1	59	3.2	9.0
Iowa.. . . .	21	:	3.3	15	3.2	5.2
Kansas.. . . .	8	:	2.8	6	2.6	4.0
Kentucky.. . . .	36	:	4.1	30	3.7	9.0
Louisiana.. . . .	1	:	1.0	1	2.0	2.0
Michigan.. . . .	196	:	5.5	75	3.0	11.0
Minnesota.. . . .	1	:	2.0	2	3.5	3.5
Mississippi.. . . .	4	:	1.8	3	3.3	5.0
Missouri.. . . .	34	:	2.8	10	3.3	5.0
Nebraska.. . . .	4	:	1.3	2	2.2	3.0
North Carolina.. . . .	5	:	1.8	4	3.1	4.5
Ohio.. . . .	41	:	5.7	27	3.2	7.0
Oklahoma.. . . .	11	:	2.8	5	4.5	9.0
Pennsylvania.. . . .	1	:	1.0	1	3.0	3.0
South Dakota.. . . .	1	:	1.0	1	2.0	2.0
Tennessee.. . . .	37	:	4.5	30	4.4	7.0
Texas.. . . .	1	:	1.0	1	1.0	1.0
Virginia.. . . .	3	:	2.3	4	1.9	4.0
West Virginia.. . . .	49	:	5.4	21	5.3	11.0
Wisconsin.. . . .	15	:	4.2	11	4.0	6.0
Total.. . . .	732	:	5.3	75	3.4	11.0

The average quantity carried away from the market by day buyers at each trip was 134 bushels (or equivalent volume in other packages). More than half of total shipments were in loads of less than 100 equivalent bushels; one-fourth were from 100 to 199 bushels. Michigan and Indiana buyers took the smallest loads, averaging 79 and 105 bushels per trip, respectively. A sizeable proportion of the buyers from these States were small retailers or fruit stand operators with rather limited requirements. Among States taking significant volume, West Virginia buyers purchased the heaviest loads, averaging 250 bushels per trip. Average size and percentage distribution of the loads purchased by day buyers from each State are shown in table 20.

Table 20.--Size distribution of loads bought by day buyers at the Benton Harbor Fruit Market, by States, 1957 season

State	Size of loads in bushels ^{1/}						Average size of load	Total number of loads
	Less than 50	50 to 99	100 to 199	200 to 299	300 to 399	400 and more		
	Percent	Percent	Percent	Percent	Percent	Percent	Bushels	Number
Alabama. . . .	-	8	31	31	15	15	256	26
Arkansas. . . .	16	5	-	5	58	16	300	19
Florida. . . .	-	20	60	20	-	-	155	5
Georgia. . . .	18	10	18	34	10	10	205	11
Illinois. . . .	14	36	36	11	1	2	128	450
Indiana. . . .	31	35	23	7	2	2	105	1,563
Iowa.	1	11	36	43	6	3	205	67
Kansas. . . .	-	-	32	47	21	-	239	19
Kentucky. . . .	-	5	32	39	15	9	245	142
Louisiana. . . .	-	-	-	-	100	-	350	1
Michigan. . . .	45	32	18	3	1	1	79	1,057
Minnesota. . . .	-	-	-	100	-	-	250	2
Mississippi. . . .	-	-	17	66	17	-	250	6
Missouri. . . .	2	6	30	34	11	17	252	83
Nebraska. . . .	-	40	40	-	-	20	185	5
No. Carolina. . . .	-	-	-	14	29	57	407	7
Ohio.	14	23	40	20	2	1	143	233
Oklahoma. . . .	-	-	7	40	17	36	342	30
Pennsylvania. . . .	-	-	-	100	-	-	250	1
S. Dakota. . . .	-	-	-	100	-	-	250	1
Tennessee. . . .	1	2	15	26	34	22	313	148
Texas.	100	-	-	-	-	-	30	1
Virginia. . . .	-	-	14	14	14	58	378	7
W. Virginia. . . .	1	2	26	47	17	7	251	260
Wisconsin. . . .	1	46	34	17	1	1	140	64
Total. . . .	25	28	25	13	5	4	134	4,208

^{1/} Equivalent bushels for products not so packaged.

(b) Suggestions for Encouraging Day-Buyer Attendance

The inclusion of a motel, floodlights, and the fenced-in area among proposed new market facilities should increase attendance of day buyers. Establishment of a lower registration fee for use of a parking space rather than a platform stall should also be favored by these buyers.

A number of day buyers in 1957 and 1958 paid more in registration fees for the use of one stall than regular buyers paid for the entire season. Some overage in this connection is appropriate because of the extra expense involved and the lack of a guaranteed minimum revenue. However, consideration might be given to the setting of a certain maximum amount that a day-buyer need pay to be entitled to free-purchase privileges for the remainder of a given season. This could be fixed, for example, at 110 percent of season-buyer rental. The possibility of qualifying for free registration for the remainder of the season would probably induce some day-buyers to attend more often. Revenue from their increased attendance should more than offset the waiver of fees for buyers who would have paid more in the absence of such an arrangement. Somewhat larger and more active market sessions should likewise result.

Day-buyers who attend the market most frequently might also be favored with the use of the same stalls to the extent that is practicable and desired by the registrants. This would tend to identify them with certain platform locations and to give them a measure of recognition which might well be reflected in still greater patronage.

APPENDIX D. RECOMMENDATION OF AREA PLANNING CONSULTANTS 1/

"The Benton Harbor City Market should be moved to a new location on the outskirts of the urban area. Such a move would be beneficial not only to the central business district, but to the operation of the market itself. Both the market and the downtown business and industrial districts need room to expand and both are dependent upon adequate traffic handling facilities for their efficient operation. In its present location, the market blocks the natural expansion of business and industry, and stands in the way of any reasonable solution to the growing traffic problem. There is no basic reason for the market to be in a downtown area. Agricultural products are taken into and carried out of the market by truck. Nearby canning and storage facilities do not need to be adjacent to the market.

"The market itself is having increasing difficulties which cannot be solved in its present location. Originally designed to accommodate two-axle trucks, the docks are now used principally by semi-trailers which extend into the middle of Market Street on the north side and Bond street on the south side, when backed up to receive their loads. Moving the docks further from the streets would only cut down the already constricted space in the center of the market where produce is brought and sold.

1/ Harland Bartholomew and Associates. Comprehensive Area Plan, Summary Report, p. 94. June 1955.

"The future of the market depends upon its ability to adapt itself to changing conditions and continue to render a superior service in competition with other marketing agencies. Any new market should be easily accessible to both trunk line, and farm-to-market roads. Also, it should not miss any opportunity to develop speedy and efficient distribution of fruit and vegetables by air freight. A location somewhere along Highway M-139 would be advantageous, or along U. S. 12 in the vicinity of the airport, or adjacent to the proposed bypass route."

